The American Artisan

THE HARDWARE RECORD

Vol. 46—No. 10. CHICAGO, SEPTEMBER 5, 1903. $2.00 Per Year.

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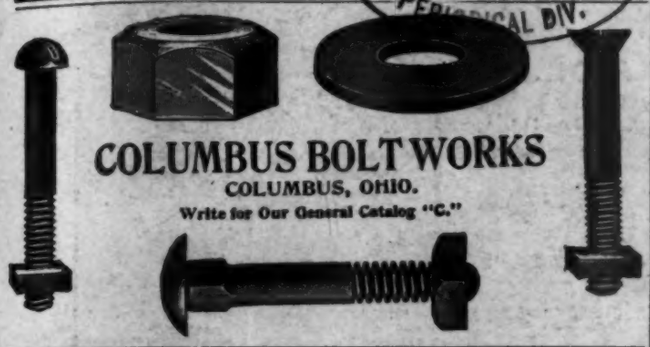


COLUMBUS BOLT WORKS
COLUMBUS, OHIO.
Write for Our General Catalog "C."

PURE ASPHALT ROOFING
Never Dries Out or Cracks Our Tarred Ready Roofing, Sisters' Felt, Building Paper, Roofing Cements, Paints, Etc. WRITE US FOR PRICES.
J. L. PERKINS & CO., 235 Lake St., CHICAGO.

Never Will Leak . . .

American Seal Elastic Oil cement will not get hard—always stays elastic.

Stops leaks in any roof—old or new, and will wear for years. Fix up the roof now and stop the leakage—in money and roof.

Use it on new work for jointing and 'round your skylights—follow it with a coat of American Seal Roof Paint—the best made—and the top of your house is safe for years. *Prices for the asking.*

THE WM. CONNORS PAINT MFG. CO., TROY, NEW YORK.

WESTERN AGENTS Dept. A. { J. L. Perkins & Co., 235 Lake St., Chicago. Steckhoff Supply Co., 107 North Main St., St. Louis.

"To discontinue your advertisement," says Ex-Postmaster-General John Wanamaker, one of the largest advertisers in the world—and naturally enough, one of the most successful business men,—"is like taking down your sign. If you want to do business, you must let the people know it. I would as soon think of doing business without clerks as without advertising."

TINNERS FIND EMPLOYMENT
By advertising and using THE POWERS AUTOMATIC CHIMNEY TOPS

They make chimneys draw, give tinners employment making stocks, and give the dealers profit

Sold by Hardware Jobbers and Dealers

Made only by **POWERS BROS.** STERATOR, ILL.

This cut free to dealers.

OSGOOD

Did you know that we turn out HUNDREDS OF SCALES OF ALL KINDS AND FOR ALL PURPOSES every week? If you want the BEST VALUE in SCALES for the LEAST MONEY, call for the scale with OSGOOD ON THE BEAM, or write us for prices. Our Catalogue is mailed to you for the asking.

Osgood Scale Company
Binghamton, N. Y.

The Atlas Bolt & Screw Co.
CLEVELAND, O.
Stove Bolts, Rivets, Rods
And Kindred Articles

Catalogue and Prices on application

Trying to do business without advertising is like winking at a girl in the dark; you know what you are doing but nobody else does.

Black Diamond Files and Rasps
PERFECT—ALWAYS

Twelve Medals Awarded

At International Expositions

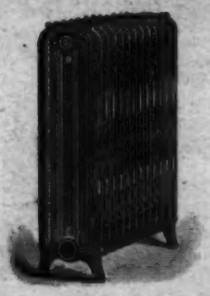
C. & H. BARNETT CO.
Black Diamond File Works, PHILADELPHIA, PA.

Nicholson File Co.
GENERAL OFFICES: PROVIDENCE, R. I., U.S.A.
Manufacturers of

FILES and RASPS

NICHOLSON, KEARNEY & FOOT, ARCADE, AMERICAN, GREAT WESTERN, McCLELLAN, EAGLE, J. B. SMITH, "X. F." GOLD MEDAL

GENEVA TOOL CO. Hand Agricultural Tools, GENEVA, OHIO.



Regardless of price the value of IDEAL Boilers and AMERICAN Radiators are absolutely superior—a full measure. Twelve Warehouses—Quick shipments.

AMERICAN RADIATOR COMPANY
LAKE AND DEARBORN STREETS, CHICAGO

"TABASCO" WATER HEATERS

ALL-STEEL, SELF-FEED SHAKING GRATE
FOR
Small Residences, Green Houses, Flats, Hotels, Baptistries, Bath Houses any place a supply of hot water is needed.

SEND FOR CATALOG.

KEWANEE BOILER COMPANY
KEWANEE, ILL.
CHICAGO STORE: 167-169 East Lake Street CHICAGO
ST. LOUIS OFFICE: 518 Bank of Commerce Bldg.

SPERRY'S SUGAR KETTLES.

Light, smooth, full measure and guaranteed perfect. Made from original patterns. Metal, the right kind in the right place. Ask your Jobber for them or write us.

D. R. SPERRY & CO.,
HOLLOW-WARE FOUNDERS,
BATAVIA, ILL.

"THE ILLINOIS"

Sold in Every State — Have Stood the Test of Years.

METALLIC SKYLIGHTS
Made in 10 Styles and 500 sizes.
"THE ILLINOIS" are the best skylights made. We also manufacture Cornices, Finials, etc. Send for handsome Illustrated catalogue. Ribbed skylight glass furnished at very lowest prices.

J. H. JONES & SON, Mfrs.,
Lock Box 33. STREATOR, ILL.

MAYER & COMPANY

MANUFACTURERS OF
GOLD MEDAL FILES

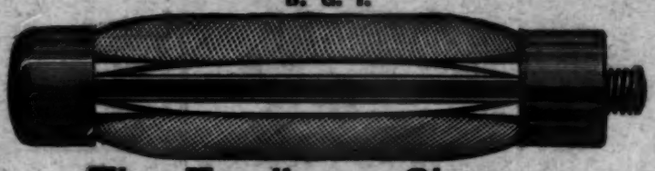
NOT IN THE TRUST

We use the best steel
Have the best methods of tempering, and
Pay the highest wages.

PHILADELPHIA, PA., U. S. A.

DO NOT BE DECEIVED

B. G. I.



The Tomlinson Cleaner

Is the most satisfactory means of thoroughly cleaning a shot gun ever invented. It will absolutely remove rust spots and keep a gun in perfect condition. Will fit any standard rod and any gun. The Tomlinson is cheap at $1.00 for it will last a lifetime with proper care. New wire sides furnished.

BRIDGEPORT GUN IMPLEMENT CO.,
Agency 313 Broadway, New York City, N. Y. BRIDGEPORT, CONN.

CORTRIGHT METAL ROOFING

The Sign of a Good Roof

FREE EDUCATION ON ROOFING in our illustrated booklet.
Shall we send it?

CORTRIGHT METAL ROOFING Co.
Philadelphia and Chicago.

PETERS AMMUNITION

Peters Factory Loaded Shells — Is the most complete line of Shotgun Ammunition on the market.

Loaded with all the standard bulk and dense smokeless powders, semi-smokeless and black powder, fulfilling every requirement of the sportsman at the trap or in the field.

Peters Cartridges — Hold the World's Records in Rifle, Revolver and Pistol Shooting.

Eastern Department:
98 CHAMBERS ST., NEW YORK,
T. H. Keller, Manager.

HIBBARD, SPENCER, BARTLETT & CO., Chicago, Ill.
CHARLES G. GRUBB, Pittsburg, Pa.
F. B. CHAMBERLAIN & CO., St. Louis, Mo.

THE PETERS CARTRIDGE CO.
CINCINNATI, OHIO.

M
TRADE MARK

Moore's Stoves Always Please

Moore's Fire Keeper

Air-Tight
Ground Joints
Guaranteed to burn
Any Kind of Coal
And hold fire 48 hours
Perfect Ash Pan
Another one of the

EASY LINE TO SELL

JOLIET STOVE WORKS,
JOLIET, ILLINOIS.

HOLBROOK, MERRILL & STETSON, San Francisco, Los Angeles, Sacramento.

Red Cross Ba

FOR 19

Are the finest line of Base Bu
They have no equal in attrativ
and price and are the bes sel
nearly 5,000 stoves in stock at a

RED CROSS ROYAL
Nos. 93, 94, 95

We Furnish the

Red Cross Victor

STEEL RANGES,

Red Cross Princess

STEEL RANGES.

They are made of
Wood's Planished Iron,
Including the
High Shelf and High Closet
and are
Elaborately Nickeled.

RED CROS BEE
Nos. 33 and 34, w h Ove

RED CROSS SIGNAL
Nos. 24, 25, 26, 27, 28, with oven 27.

HAVE YOU OUR CA
You Can Have the Sa e for

J.P.LINDEMA

WESTERN BRANCH
CO-OPERATIVE FOUNDRY CO.
ROCHESTER, NEW YORK

Mi

Base Burners

R 1903

Base Burners on the market.
attractiveness, variety of styles
best sellers made. We carry
ock at all times at Milwaukee

CROSS BEE
nd 34, with Oven 33

SEE OUR
NEXT

ADVERTISEMENT

A Fine
Assortment of

OAKS

OUR PRICES

ON SAME

ARE RIGHT

RED CROSS GARNET
Nos. 25, 26, 27, 28.

RED CROSS SUNBEAM
Nos. 44, 45, 46. 47, 48.

OUR CATALOGUE?
he Sa e for the Asking.

MANN & SONS

Milwaukee, Wis.

The Man Who Has a Pay Day

"Labor has sure reward."—Every two weeks.

Monday, September 7th, 1903, is Labor Day

It will be a day of Parades, Fire Works and Good Cheer Generally; and, is set apart as a tribute to and in recognition of the Dignity of American Labor

Our workmen, the men who make the "FAMOUS PITTSBURGH STOVES" will form a section of Pittsburgh's Monster Parade—Their banners will read as follows:

GOOD LUCK STOVES — Successful Everywhere
GRAFTON STOVES — Famously Good
CINDERELLA STOVES — Never Fail
TREMONT STOVES — Work and Wear
ETNA FURNACES — Make Heat That's Cheap

Our Complete Equipment and our Advantage of Location, together with our force of excellent workmen have enabled us to successfully demonstrate to our trade that

Pittsburgh Stoves are their Greatest Profit Producers

and as the world gives its admiration, not to the man who does what nobody else attempts to do, but to that man who does best what some do fairly well, we applaud the successful efforts of our workmen and wish them fair weather and a pleasant time in the "Doings of the Day."

W. D. SAGER
Chicago, - - - Illinois
Cinderella Stoves

Tuttle-Allen Stove Co.
Kansas City, - - Missouri
Good Luck Stoves

Pittsburgh Stove & Range Co.

PITTSBURGH : : : : PA.

"Mirth is the best medicine, everybody should take some of it."

Jim Dumps

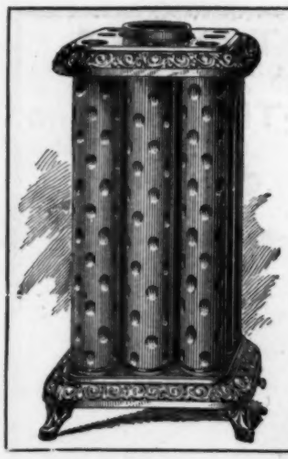
ROYAL OAK

THE MONARCH OF THEM ALL!

THIS up-to-date Oak Stove is the latest production on the market made in the newest and most modern stove foundry in America. Embodies practical ideas of skilled labor. Having every labor-saving appliance and modern equipment we challenge competition. The **Royal Oak** has XXth Century Ornamentation and is absolutely air-tight and the price—well if interested write to us and learn a thing or two about our Steel Ranges, Steel Cooks and Hot Blast Heaters. : : : : : : : : :

ROYAL STOVE & RANGE CO.
GREENVILLE, OHIO

Makers of the Most Modern Stoves in the Newest Stove Foundry.



SPECIAL TO THE TRADE

What better proposition can you offer a man than to save half his fuel? **New Era Radiators** will do it, and are now made in styles, sizes and prices to meet the requirements and circumstances of everybody who has a house to heat, whether they use stoves, a furnace, or a steam or hot-water system.

Our method of placing a Radiator in the celler and stopping the enormous waste heat from a furnace or boiler, without the objectionable feature of running a smoke pipe through the house, is worthy of investigation.

If you have never sold Hot Air Radiators, or have handled some other kind, it will pay you now to make inquiries about **New Era Radiators.**

WILMOT CASTLE COMPANY, ROCHESTER, N. Y. 77 ELM STREET

4,866 sq. ins.

The Part that Does the Business.

Sell The Radiator That Radiates

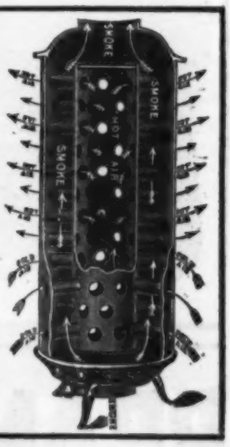
Take a common sense view of heating. If you wish to heat a poker you hold it OVER the fire, not at the SIDE.

We hold 96 to 120 pokers over the fire, each having a hollow air space in center, through which a current of air rapidly passes, sending the heat to all parts of the room, getting results which no DRUM or SIDE HEATER can give. Advertised in 82 family papers and magazines, bringing 18,000 inquiries about the Rochester Radiator. Those from YOUR town are referred to YOU while you carry our goods. Thus we sell them to you and then sell them FOR you. A postal will bring you full description and proofs from men in the trade who have sold thousands of them.

We will remember you with a Souvenir later, watch out for it. Address

ROCHESTER RADIATOR CO.,

No. 120 Furnace St., ROCHESTER, N. Y.



Independent Stove Pipe Radiators

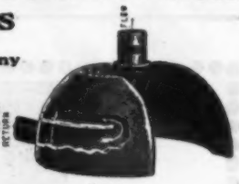
The kind that sell and *stay sold* because they give satisfaction every time : : : : : :

INDEPENDENT REGISTER CO., 158 Columbus St., Cleveland, O.

Eastern Representative: W. H. Landers Co., Syracuse, N.Y.

The Champion Hot Water Combination Heaters

They Fit Any Furnace



Base section when used without ring sections.

Ring section

These Heaters are made in five sizes diameter, and from 100 to 700 square feet radiation capacity.

Will heat those cold rooms or an addition to the building. Will increase the capacity of any furnace. Are cheaper than coils and will do more work.

Write for new circular. Manufactured by

FRANK D. STOLZ

156 Webster Ave., CHICAGO, ILL.

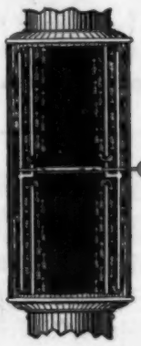
BURTON'S FUEL ECONOMIZER

Attached to a stove pipe **saves** more **fuel** and **radiates** more **heat** than any other stove pipe attachment

AN EASY SELLER.

Assertions Backed by Guarantee.

The W. J. BURTON CO., Detroit, Mich.



40% FUEL SAVER

for Hard Coal and Wood. One stove fitted with **Reddy's 40% Fuel Saver** gives as much heat as two stoves without it. Takes the place of a joint pipe. Keeps the heat from going up the pipe. Constructed on scientific principles, causes perfect combustion; **one hard coal fire lasts 3 days.** Made of No. 20 and 24 sheet steel on inside and polished steel on outside and nickel trimmings. Write for full particulars.

JAMES M. REDDY, 5552 Cottage Grove Ave., Chicago, Ill.

Tel. Hyde Park 5343.

For Sale by Wholesale Dealers and Jobbers.

BURT HOSTERMAN,

Marshfield, Wis., writes:

"I do not think any hardware man has any business to start a hardware store without your paper."

Large 10 oz. Can.

We Make It!

The BEST Air Drying Iron Enamel Made.

Try a 1-Dozen Case From Your Jobber.

Nickel Plate Stove Polish Co.

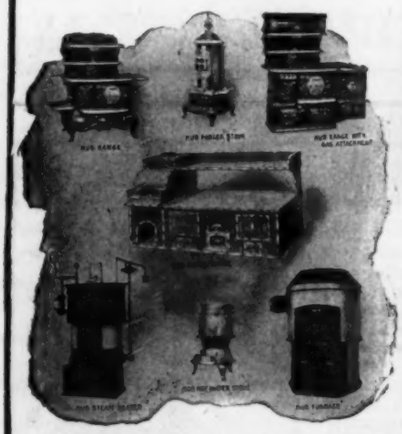
CHICAGO

M. TRAVILLA,
QUINCY, ILL.,
MANUFACTURER
"Air-Tight" Stoves

ASK FOR PRICES.

Wellsville Polished Steel
"THE VERY BEST."

A few specimens of the extensive line of



HUB RANGES AND HEATERS

Manufactured and warranted by

SMITH & ANTHONY CO

BOSTON, MASS.

Send for descriptive circulars.

Advertising is the root of all money.

BRAND STOVE CO.

We make largest line of cooking and heating apparatus, cast cooks, cast ranges, steel cooks, steel ranges. hotel outfits, heating stoves, furnaces. hot water and steam heaters. Send for catalogue.

MILWAUKEE, WIS.

FREIGHT

is a big item on a steel range, but the shrewd dealer who handles the **Willard Steel Range** can say to his customers, "I can offer you a range of highest quality right here in town, at a lower price than the catalogue house will give it to you f.o.b. Chicago, thereby enabling you not only to make a handsome saving in cost, but saving you freight also." Hundreds of dealers are doing this, why not you?

Wm. G. Willard, Mfr.

619-621 N. Fourth Street, ST. LOUIS, MO.

CHICAGO FURNACE SUPPLY CO.

64-66 West Monroe Street, CHICAGO

Furnace Pipe, Elbows and Fittings. **Write for Special Prices and Illustrated Catalogue.**

Boomer Furnace

REGARDING

Boomer Furnaces

OR

Boomer Steel Ranges

We want to state in strongest terms possible that if you want the

HEAVIEST,
MOST DURABLE,
MOST ECONOMICAL

and easiest to take care of Furnace or Steel Range buy a **BOOMER.**

Boomer Steel Range

Neither time nor money is spared to make them the Best.
Buy Boomers and save your coal bills.
We invite investigation.

THE HESS-SNYDER CO.,
Manufacturers MASSILLON, O.

Border Copyright 1898

AMERICA'S BEST

MILLER RANGES

COAL AND GAS

CINCINNATI, OHIO

"If you would be a man speak what you think to-day in words as hard as cannon balls and to-morrow speak what to-morrow thinks in hard words again though it contradicts everything you said to-day." Chicago Jewel Steel Ranges are good Ranges, and they have the two qualities that insure the merchant a good profit—the best possible material and workmanship, and half a dozen distinctive Jewel features that no customer will do without when he sees them. We said this yesterday, we say it to-day, and we expect to build ranges of which it will be true one hundred years to come. George M. Clark & Company Division, Chicago.

Van's

Pat. Improved Wrought Steel Portable

Range

For HOTELS, RESTAURANTS, PUBLIC INSTITUTIONS, BOARDING HOUSES and PRIVATE FAMILIES.

All Kinds of Hotel Implements for Culinary Purposes.

Manufactured and For Sale by

The John Van Range Co.

419 Elm and 410, 412, 414 & 416 Home Sts.
CINCINNATI, OHIO

"A Good Record is the Best Guarantee for the Future"

All-Steel Peerless Ranges

Favorably Known for Over Nine Years

Malleable Steel Top Plates, (ground smooth and bright)
Malleable Doors and other fittings,
Steel-Asbestos-Steel Flue Bottom,
Massive Fire Box,
Steel Oven Shelf,
Extra Large Ovens,
Extra Large Reservoirs,
Pan for elevating wood fire,
Pouch feed and blue steel (without extra charge)

Catalogue Shows These and Other Good Features.

Peerless Steel Range Works

CHICAGO.

Return Flue All Cast Iron.

MUELLER

FURNACES AND BOILERS

BRING CUSTOMERS TO DEALERS HANDLING THIS LINE

All Styles—For All Kinds of Fuel.
Get Our Special Register Offer.

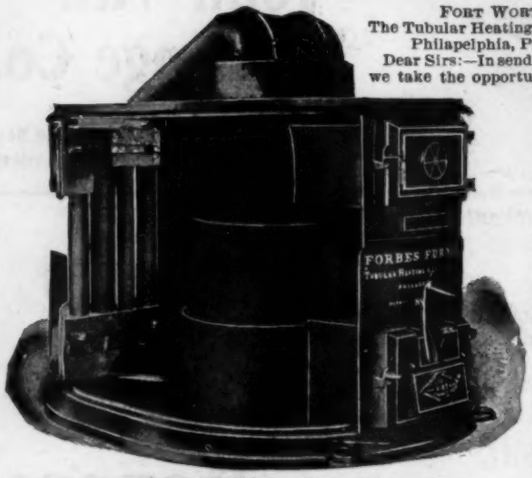
Portable Steam Boiler.

Everything In The Heating Line.

L. J. MUELLER FURNACE CO., 191 Reed St., Milwaukee, Wis.

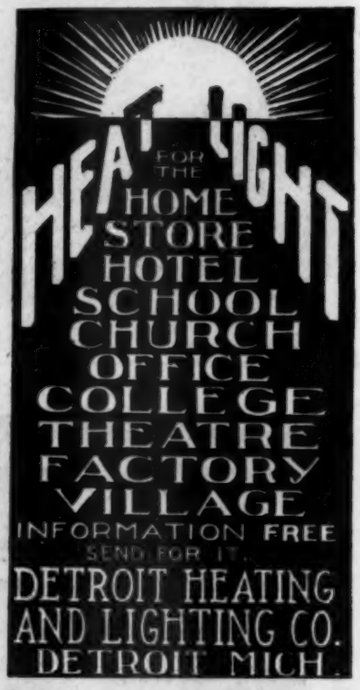
TUBULAR HEATING AND VENTILATING CO.

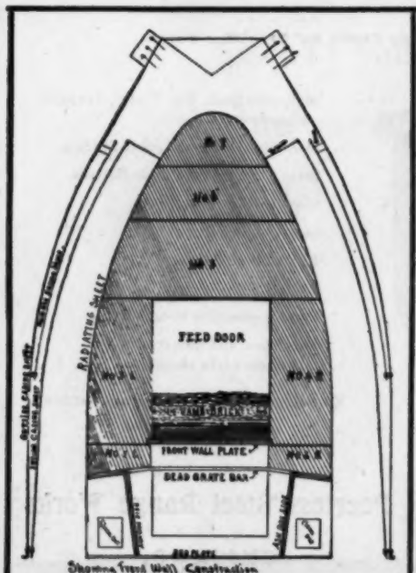
PHILADELPHIA, PA.



FORBES FURNACE. Only 61 in. High.

FORT WORTH, TEXAS, June 12, 1903.
The Tubular Heating & Ventilating Co.,
Philapelphia, Pa.
Dear Sirs:—In sending you the inclosed check, we take the opportunity to say that the two No. 6 Forbes heaters purchased from you last fall have given the fullest satisfaction. They are in use in the "Madrid," a small apartment house, containing twenty rooms. We have found that they not only furnished plenty of heat but did it with a very satisfactory coal bill. The fuel used was soft lump coal for the first fire in the morning but the rest of the day only slack, from soft coal, was used, costing $2.50 per ton. We think the heaters a great success and do not see how you can improve upon them.
Very truly, &c.,
The Fort Worth Real Estate & Investment Co.,
By Frank Gray, Pt.





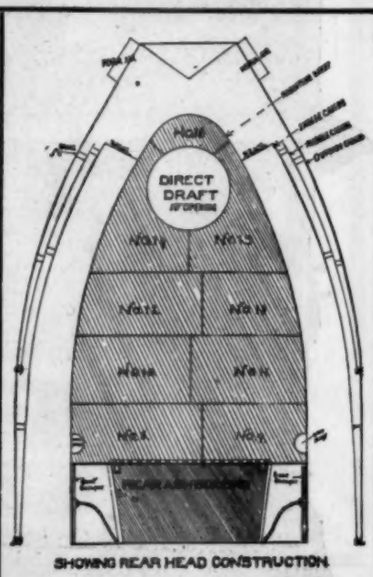
Showing Front Wall Construction

THE STANTON

is built on strictly scientific principles—each point covered by letters patent. Front and rear heads protected on inside by specially made fire clay blocks which help to equalize the heat. Flues are large making it possible to burn cheapest grades of coal.

Better write for catalogue.
Also keep looking at this space.

THE STANTON HEATER CO.
MARTINS FERRY, OHIO.



SHOWING REAR HEAD CONSTRUCTION

OUR LATEST PRODUCTION

The New Radiant Home Force Draft Furnace

WITH

Original Patented Air Blast Fire Pot
One Piece All Cast Radiator
Extra Large Double Feed Doors
Air Blast Fire Pot and Force Draft

Ring insures Perfect Combustion with all forms of Soft Coal, Slack and Lignite

Burns Soft Coal, Slack and Lignite

EXCLUSIVE AGENCIES

Prices, terms, etc., on application.

GERMER STOVE CO.

Largest Manufacturers of Strictly High-Grade STOVES, RANGES and FURNACES.

Main Office and Foundries: ERIE, PA.

WESTERN BRANCH:
231-247 Newberry Avenue, CHICAGO.

Emperor Furnaces
FOR WOOD.

Simple, Safe, Durable. Economical in Fuel.

The Best and Cheapest Line of Wood Furnaces . . .
Furnished for either Brick or Galvanized Iron Casing.

SEND FOR CATALOGUE.

Bergstrom Bros. Co.

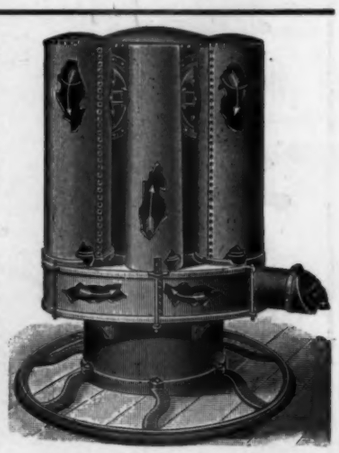
NEENAH, WIS.

Burn Hard or Soft Coal or Coke. Large Doors.

REASONS
Why the American Furnace Should Receive First Consideration

It is strictly smoke and gas tight.
It is made of heavy wrought steel and will not crack.
It has more effective heating surface than any furnace made.
Its surfaces are all smooth, and no dust receptacles.
It burns either hard coal, soft coal, coke, wood or natural gas.
It can be managed by the average house help.
Its surfaces are all perpendicular, therefore a powerful heater.
It heats the largest volume of air with a given amount of fuel; thereby furnishes warm air instead of hot air.
It is very powerful, durable and economical.
Its surfaces are all curved, which prevents buckling.
It is very closely riveted, tight like a boiler.
It has a very large feed door, so that large lumps of coal and wood may be used.

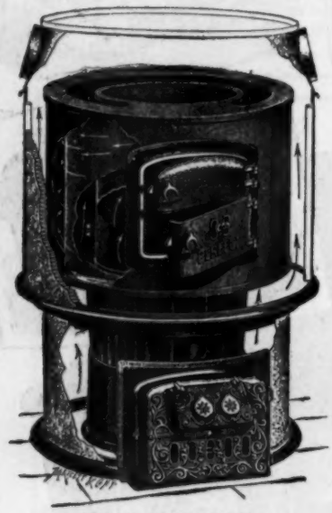
The American Furnace Co.
1911-13 Pine Street, ST. LOUIS, MO.



Large Radiators, Easy to Clean Out.

Write for prices and secure the agency before the other fellow gets it.

Richardson & Boynton Co.'s
"PERFECT" FURNACES



COAL AND WOOD

Are Universally Known as First Class Goods.

SEND FOR CATALOGUES

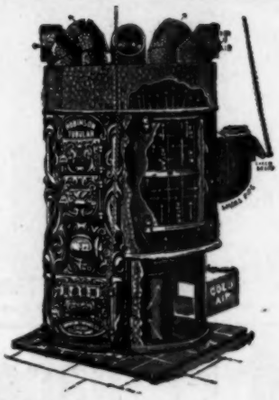
Established 1837.

SOFT COAL.

84 LAKE ST., CHICAGO, ILL.

232-234 Water St., New York. 51 Portland St., Boston, Mass.

Robinson Tubular Furnace



Sectional View, Showing Wrought Boiler Tubes in Radiator.

A Full Revertible Flue Furnace.

For Hard Coal or Wood

Furnished with Wood Doors, when desired, at no additional cost.

F. D. Hennessy, 299 Irving Ave., Chicago, writes: "I want to say that I am pleased beyond expression at the results obtained from the Robinson Tubular Furnace. This means a good deal considering the severe winter we had, and so far can calculate to save four tons of coal this season."

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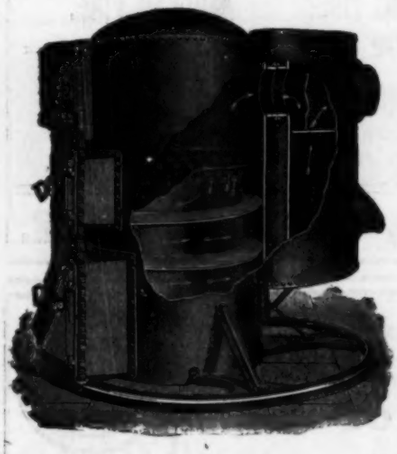

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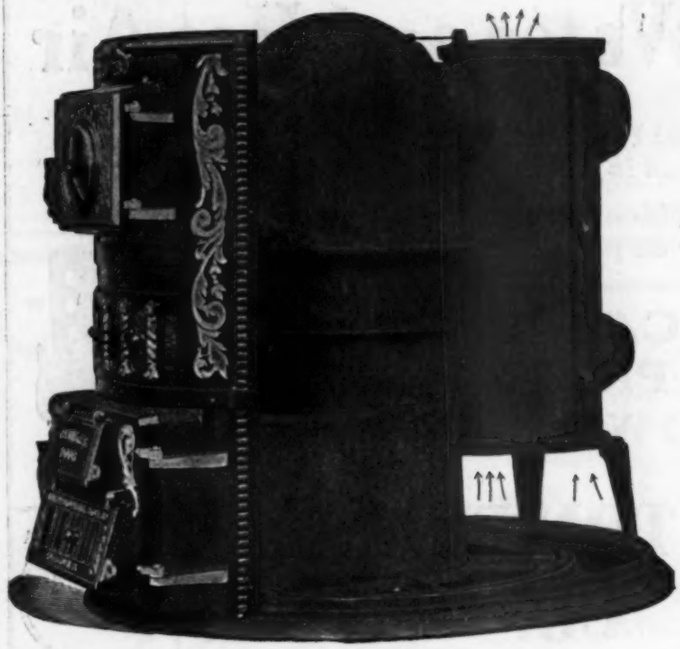

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"LOW DOWN" TYPE

MADE IN 4 SIZES.

It has an extremely large amount of radiation for the size of the fire pot used. This furnace can be cleaned with the greatest facility.

It is made with smoke collar attachment and gas-burning arrangement when soft coal is used.

The furnace throughout is made extremely heavy and will stand severe usage

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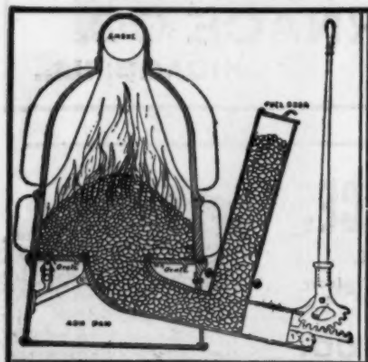

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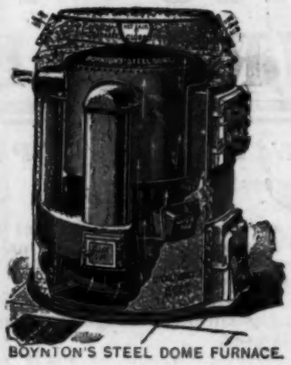

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Six-and-a-half-inch Round Elbow
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Three-pint Basin
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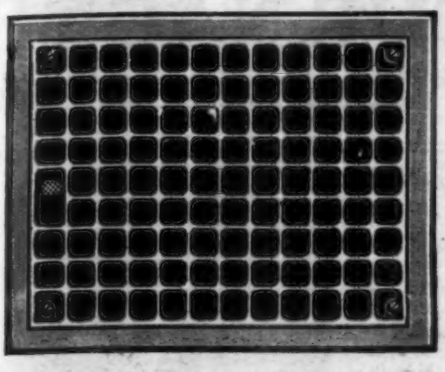

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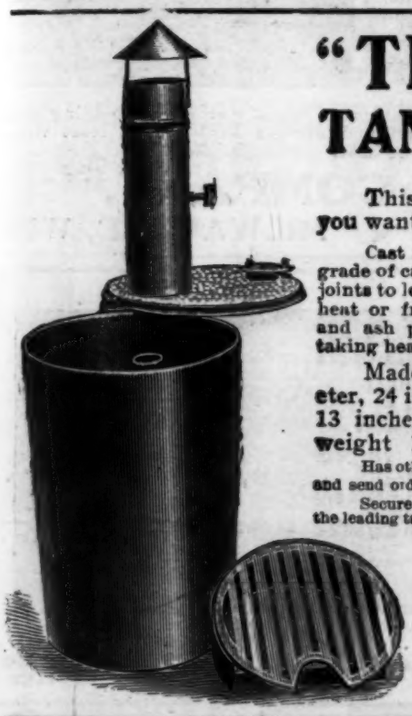

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The register having full capacity of hot air pipe for large living rooms or for heating a room on the first floor and extension to second. Has a face of neat design and not a hole in the wall when open. Has a regulator which holds the damper permanently in position. Can not get out of order. Double safety box included in each register.

Send us sketch for plans of latest method of heating with *GILT EDGE FURNACES* and *JONES REGISTERS*, least work, least pipes, least waste of heat, most economical.

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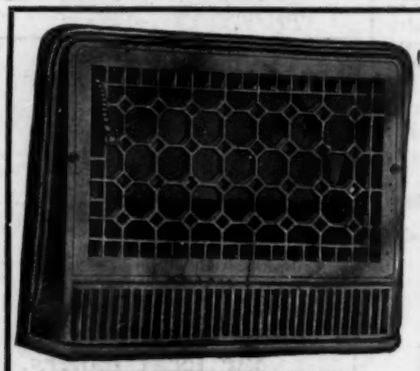

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Examine Genuine

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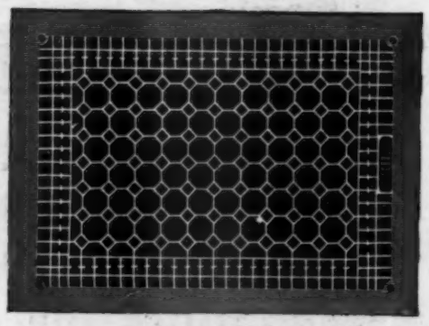

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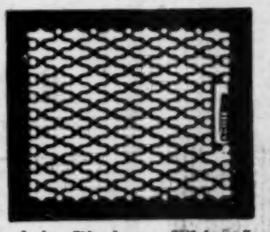

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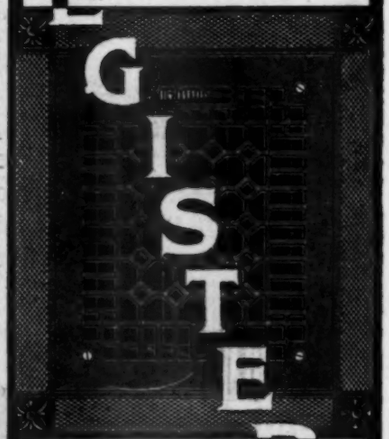

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Wall Register

STRONGEST AND NEATEST

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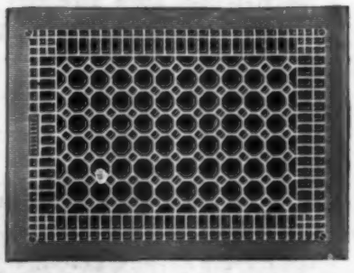

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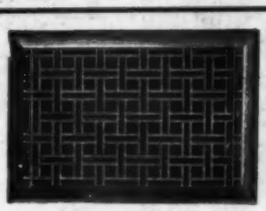

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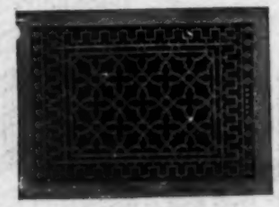

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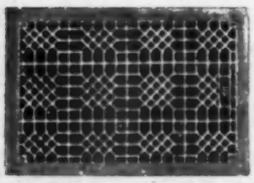

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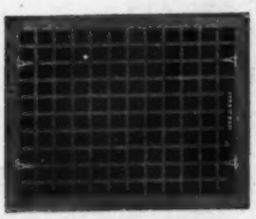

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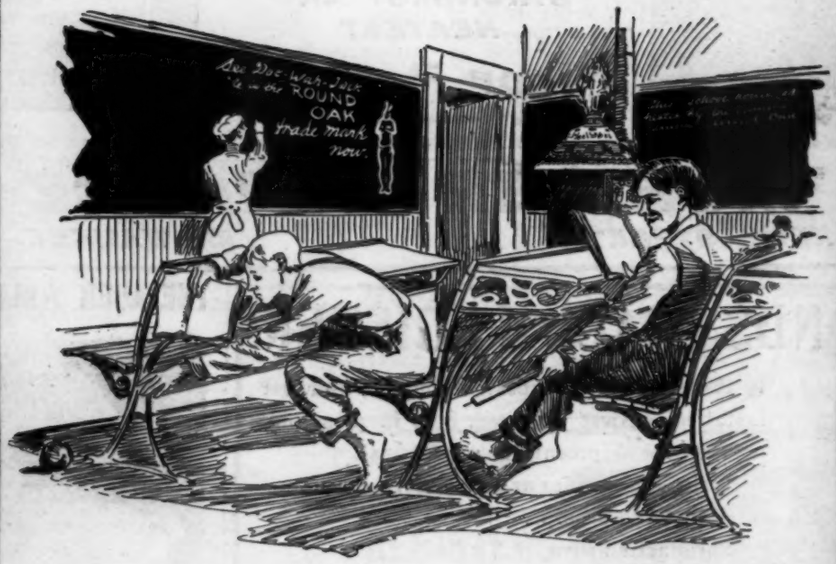

EVER happen to notice the corners of the Round Oak Steel Range? They always catch the attention of people who know about steel ranges. Just a plain bend in the steel—strong, neat, cleanly and workmanlike. The rest of the range is made just as superior in each particular as this "range corner" is superior to all others. Send for the book of the range and inquire for prices. It's worth your while.

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7

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ESTABLISHED 1880.

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Representative of the Stove, Tin, Hardware, Heating and Ventilating Interests.

PUBLISHED EVERY SATURDAY.

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69 DEARBORN STREET, CHICAGO, ILL.

Entered at the Chicago Post Office as Second Class Matter.
THIS PAPER IS A MEMBER OF THE CHICAGO TRADE PRESS ASSOCIATION.

CHICAGO, SEPTEMBER 5, 1903.

INTERNAL commerce conditions throughout the United States, as reflected by the July report of the Department of Commerce and Labor, through its Bureau of Statistics, are quite satisfactory. Receipts of live stock at five markets this year to the end of July amounted to 17,734,847 head. Last year 17,232,004 head were reported to the corresponding date, and 18,599,383 head in 1901. In 1901 a total of 374,976 cars of stock arrived at the same five markets, 305,419 cars in 1902 and 341,802 cars in 1903.

NEW LAWS in relation to child labor became operative in New York city on September 1 and the authorities hope their enforcement will have the effect of removing from the street and sending to the schools hundreds of little chaps who are now in a measure waifs without restraint. The number of very small boys selling newspapers on the streets of New York is a marvel to the stranger. They are everywhere, both day and night—at night much to their own detriment. The majority of these lads are the sons of foreigners helping to win bread for the rest of the family or intent upon an honest penny for their own sakes. Not altogether do they enjoy the benefits of a purely commercial training by this free and easy life in the streets. Oftened a horde of petty vices chokes the pure spring of youth and steers the young feet into paths, if not always criminal, more harmful than good.

In commenting on these new laws, the New York Commercial says: "As children must obtain a permit to sell newspapers, the law will eventually thin the ranks of the street gamin, leaving only the eligible engaged in the occupation, but it will make room for many otherwise helpless aged persons or others in various ways incapacitated to become self-supporting. The New York urchin is the most independent little animal in the world and there doubtless will be some interesting times ahead for the truant officers."

Oven Thermometers. THE DAY of the pattern rule and the protractor has superseded that of the "rule of thumb" mechanic who guessed often and valiantly and swore equally often and valiantly if the material failed to cut as his omnipotent eye had measured. The slovenly guesswork of a past era, while practically routed from the mechanical world, is still more or less formidable in the realm of culinary science. Conservatism has ever characterized the gentler sex whose environment makes all reformers rank iconoclasts. Cooking should be a most exact science, yet the old-time recipes which grandmother used to make her famous puddings and pies, cakes and custards provided for a "pinch" of this, "a handful" of that; a "few tablespoonfuls" of sugar, a "cupful" of butter, a "pan" of dough, etc. While grandmother did famously with these recipes, her successors have in vain tried to duplicate her results by following her inaccurate methods. The modern cookbook is an agent for accuracy, and the oven thermometer is equally important. The former measures our culinary ingredients, the latter our oven heat. Grandmother would put her raising of bread in the oven when she guessed the heat was right. When the bread was not as good as generally, the yeast or the stove, the fuel or the flour was to blame. In the up-to-date kitchen, guesswork as regards heat is a blemish on a housewife's skill, as she can gauge thermal conditions scientifically by the use of an oven thermometer which can be attached to any cook stove.

Last week we published an excerpt from a *brochure* sent out by the Agricultural Experiment Station of the University of Illinois, in which two women experimenters in domestic science, Isabel Bevier and Elizabeth C. Sprague by name, with the airy arrogance one might expect from obscure demonstrators of an as yet obscure science, thus deride oven thermometers:

"The means for securing accurate work with the stoves, ranges, ovens and utensils now upon the market are not all that could be desired. For instance, how is any cook expected to be able to make a definite statement about what is going on inside the average oven, as now constructed? The much lauded oven thermometer 'which can be placed in the door of any oven,' by actual test with a good chemical thermometer showed a deviation of from 50 to 100 degrees from the standard. It requires rare intelligence indeed to tell what is going on inside a black iron box by looking at the outside of it."

Why, we wonder, was this pamphlet entitled the "Roasting of Beef"? Why not "Roasting the Oven Thermometer"? This matter has created considerable interest in the trade, as shown by the letters received from stove manufacturers and retailers. Even retailers who never used these goods are favorable to them, and the candid expression of disfavor of one leading western manufacturer is, in our opinion, considerably nullified by the statement that his unfavorable experiments with these thermometers was as far back as 1883. The making of oven thermometers being a progressive science, it can be taken for granted without dangerous chance of error that the oven thermometer of 1903 is better than that of 1883 and that the oven thermometer made in 1923 will make the best articles in this line on the market to-day take a back seat.

Supposing the Fahrenheit standard had never, to any extent, been used for baking purposes, which, as

a matter of fact, it has not, what would be the use, or reason for making an oven thermometer conform to it?

If an oven thermometer indicates a point on the dial at which an article of food is properly baked, and does so invariably, week in and week out, what more is required? A knowledge of the number of Fahrenheit degrees in the center of the oven would help no one, for there never has been, or can be, with the metals at present known, a thermometer that will continue to indicate correctly a positive heat of 400 to 500 degrees Fahrenheit. Such heat will change the relative expansion of any two metals, after long exposure. Mercury will become volatile after long exposure to high heat. The only thing to do then is to indicate a *relative* heat, the ratio between which and the *positive* heat of the oven will always be the same each time it is used, so the same result can be obtained in baking various articles at different points on the dial. This is what in our opinion every good oven thermometer does, and has been doing for the last decade and a half, to the great satisfaction of many thousands who are using them.

But why should we take the dictum of these attaches of an agricultural experimental station as *ex cathedra* evidence concerning oven thermometers? Then again, granted that their tests were accurate, for the sake of argument, would it not seem rational to assume that a thermometer specially constructed for use in ovens would be a better criterion than a "good" thermometer designed for miscellaneous use? Then again, it should be borne in mind that the average housewife does not smelt pig or aluminum in her kitchen oven; and a heat of 1,500 degrees Fahrenheit or thereabouts that is essential to a Bessemer converter would play havoc on the best constructed cook or range that was ever made.

Consequently should we even go so far as to concede the validity of their offhand "tests," which we are not for a moment ready to do, the error of their position would still be clearly marked, as the average oven thermometer will accurately tell about "the inside of the black iron box."

The mistake these scientific ladies make, it seems to us, is to consider it of more importance to have a thermometer agree with some standard of division of heat, that has never been used, to any extent, for baking purposes, than it is to have some simple standard which everybody understands and from which they can note by association the changes and the different baking points for various articles of food. Suppose the indicator is divided off into "warm," "hot," "very hot" and "extra," or follows the similitude of a clock face or a division of numbers, letters or colors of any kind. A 12-year-old child can accurately grasp these details and tell perfectly the right heat of the oven.

Furthermore, they do not seem to understand that high heat thermometers, in order to agree, *must* have *exactly* the same exposure to the heat. When an oven thermometer has the *same exposure* as the mercury in a Fahrenheit thermometer, they practically agree with the small Fahrenheit figures on the dial. They will not average over ten degrees difference at a temperature of 300 degrees Fahr. Sometimes there will be 20 or 30 that will not vary 5 degrees, then there may be one that will vary 20 or even 30 degrees, but these variations do not injure the usefulness of the thermometer because of the manner of exposure on the oven door. There is always a difference of from 50° to 200° Fahrenheit or so between the temperature on the oven door, and the center of the oven, and the ratio is irregular at different heats on account of the greater radiation from the door at higher heats than at lower.

But all that does not invalidate the fact that on nearly all patterns of stoves a turkey will bake at about "6:30 o'clock," if a clock face is used, and bake just the same 1,000 times with the hand at those figures, and raised bread at "Very Hot," if such is the system of thermometric indications, or biscuits at "e," if alphabetical indication is used on the thermometer, and continue to do so for years, which fact makes the oven thermometer a very great convenience, and saver of fuel, because they do not use 50 or 100 per cent more heat than is necessary to do the work. If a variation from these figures is necessary, on account of different patterns of stoves, it is very soon found out and corrected by those using it.

To summarize, would state that we believe that anybody with a good oven thermometer *"can make a definite statement about what is going on inside the average oven."* This statement is that the heat of the oven is or is not just right for the special culinary operation under way at any special time. What more can be expected of a heat gauge?

That progressive stove men in the ranks of both manufacturers and dealers are favorable to these thermometers is shown from the following letters we have received the past week. If further proof were necessary as to the widespread use of these goods it would be thoroughly demonstrated by the publication of the various lists of stove manufacturers using these goods sent out by the various oven thermometer manufacturers as advertising matter testifying to the merit of their respective lines. In the aggregate these lists undoubtedly embrace a very goodly portion indeed of available customers.

The Cole Mfg. Co., Chicago, write: "We have tested a number of oven indicators or oven thermometers, as they are called by some people, and have fully decided to use the oven indicator on our new Coleized Steel Hot Blast range. These indicators do not necessarily work alike or test with any chemical thermometer, but a woman can rely on her oven indicator indicating the same degree of heat whenever she uses her range and once she has ascertained the proper degree of heat for different kinds of roasting and baking she can always rely on the condition of her oven by the indicator, which is so simply constructed that it is impossible to easily get out of order and which even under unfavorable circumstances is a far superior guide to the condition of the oven than the old plan of guess work. All that is required of a successful oven indicator is not that it shall register by degrees, but that it works uniformly."

The Hess-Snyder Co., Massillon, O., write: "We would advise you that we sell very few oven thermometers. We have never given those we have sold a test as to their accuracy, but hardly believe there should be any deviation, such as referred to. We have

never had any unfavorable report, therefore conclude that they register correctly."

The only opinion we received on this subject which is adverse to these thermometers is one from a leading firm of western stove manufacturers who found these thermometer unsatisfactory 20 years ago. Their letter is as follows:

"Some twenty years ago we experimented thoroughly with oven thermometers, and abandoned the use of them, as we found the ordinary conditions in the kitchen were such that they were of no practical benefit. We also found that in a short time the spring of the metal became so changed by the action of heat that the thermometers were not reliable."

Henry Gleason, New York, writes: "I notice in THE AMERICAN ARTISAN of Aug. 29 issue a brief report from the Mesdames Pessimist in regard to the use of oven thermometers. I agree with them that it requires rare intelligence to tell what is going on inside of the black iron box, and for that reason the oven thermometers have become in general use as a sure indicator of the required heat in the oven to bake the various articles of food. The fact that most of the leading foundries of the country are now putting them on their ranges is self-evidence that they are practical and also popular. I have given the mattre a great deal of attention by corresponding with the foundries who use them, and have gone so far as to visit a number of households to inquire as to their practicability, and have found in many cases that they cause a large saving of fuel. The practical housewife, when not baking, notices that the indicator points to "Very Hot" and closes her damper. The trade have found them valuable where the flues were imperfect and draughts indifferent, which prevented them from putting in the oven the various articles of food before the oven arrived at the proper heat. We have had the "Standard Indicator" tested by scientific men; also we have letters from a number of foundries, who assured us that the test was more than satisfactory. Oven thermometers have been in use about twelve years and the manufacturers of the Standard Indicator business has increased over 50 per cent this year. The philanthropic ladies make a statement that is ridiculous in regard to the deviation they made of 50 to 100°, yet they offer no remedy. I would advise them to secure the X-rays, which may penetrate through the solid cast iron body."

J. F. Maxey, Ozark, Ark., writes: "I have not paid any experience with the oven thermometers and could not give you anything from my practical knowledge as to the accuracy in the registry of any kind of oven thermometer. From my experiences with thermometers I would think that a thermometer could be made that would register as correctly as any standard thermometer could. But I think the most practical test is the naked or bare hand."

C. A. Peck, Berlin, Wis., writes: "I would say that while I have a great deal of respect for the opinions of 'Experiment stations,' I think in this case that they are mistaken.

"It does not 'require rare intelligence indeed' to know that there is paint inside a metal pail so labeled, although it may be as invisible as the 'inside of a black iron box.'"

Geo. Englehardt, Chicago, writes: "I have sold quite a number of stoves with thermometer attached, but having had no complaints, have not followed it up to see if they showed a deviation as great as stated by the Illinois University domestic science experiments. Not having had any complaints I doubt their statement."

Fred. Neudorff, St. Joseph, Mo., writes: "I never had any experience with an oven thermometer and cannot say anything concerning their reliability, but believe that if they are dependable they are a good thing and a splendid talking point; if they are not dependable they are an absolute detriment to a stove.

"The natural curiosity of our sisters, I think, would prevent them depending on a thermometer when it is so pleasant to see the bread raise and to catch a whiff of the delightgul odor of a fine roast of meat."

M. H. Cochran, Iowa City, Ia., writes: "In reply to the statement of the ladies of the Experiment station of the University of Illinois I will say that oven thermometer is all right. I have sold them a long time and they generally give satisfaction. The most of them do not register the exact temperature in degrees, but only the points on the dial for the different kinds of baking. One was marked on the dial in figures from 1 to 6 and printed card marked to correspond with the dial. Each figure having written the kind of baking to do when the hand reached that figure. Others are marked very hot, hot and medium. A lady soon learns at what point to put the kind of food she is baking in the oven. None but an expert could tell the exact degree required for each kind of baking, but easily learn by the hand on the dial plate.

Shidler Bros., South Bend, Ind., write: "In regard to the use of oven thermometer would say: We have never used an oven thermometer in the door of a range or cook stove, but have used the oven thermometer which is placed inside the oven with perfect success and have found it not to vary in its registering. Anyway, in my opinion, the door of the oven is not the proper place to locate the thermometer to determine the condition of the oven, since the opening of an outside door would be sufficient to change the registering of the thermometer and yet would not change the temperature of the oven.

"It would seem that to have the learned ladies of the Agricultural Experiment station of the University of Illinois to condemn all the cooking utensils and all the cooking stoves, ranges and ovens now on the market, the manufacturers of these articles would awake to the inferior quality of their product and make such articles as these learned ladies could use with better results. I would say in conclusion that the old adage, 'The poor mechanic always quarrels with his tools' will probably cover the entire difficulty."

F. STEINHART, consul-general of the United States at Havana, Cuba, has submitted a report giving the wages of skilled and unskilled laborers in the cities and towns under the jurisdiction of that consulate-general. From this we learn that the Cuban tinners receive from $1.00 to $1.50 a day.

News Siftings

The Grundy Stove Co. are a new Guelph, Ont., concern capitalized at $40,000.

The Toledo Cooker Co., Toledo, O., will shortly erect a new factory in that city.

The Jones Hollowware Co., Baltimore, Md., will increase its capital stock from $50,000 to $75,000.

John McClurg, A. M. Wall and W. W. Patten are the incorporators of the Standard Stove & Range Co., Pittsburgh, Pa.

The Bullock-Beresford Mfg. Co. are a new Cleveland, O., concern capitalized at $5,000 for the manufacture of gasolene engines.

W. G. Crosby, E. G. Gridley and T. A. Gall are the incorporators of the Mesaba Cliffs Iron Co., Duluth, Minn., capitalized at $100,000.

The Diamond Stove Co. are a new Detroit, Mich., concern capitalized at $100,000, of which $51,000 consists of patents owned by Newton J. Corey.

The Simpson Stove & Mfg. Co., Pittsburg, Pa., manufacturers of gas stoves and ranges, have removed their offices from Pittsburg to Canonsburg.

C. S. Gilman, Henry A. Beckerman and F. C. Ludwig are the incorporators of the Colonial Brass Co., 419 Market street, Camden, N. J., capitalized at $60,000.

Charles E. Finney, Thomas B. Adams, Newton Adams and Frank Finney are the incorporators of the General Metals Co., New York City, capitalized at $1,500,000.

It is said that J. L. Smyser and R. M. Kelly, Jr., are organizing a company for the establishment of a malleable iron foundry at Louisville, Ky., which will probably be capitalized at $250,000.

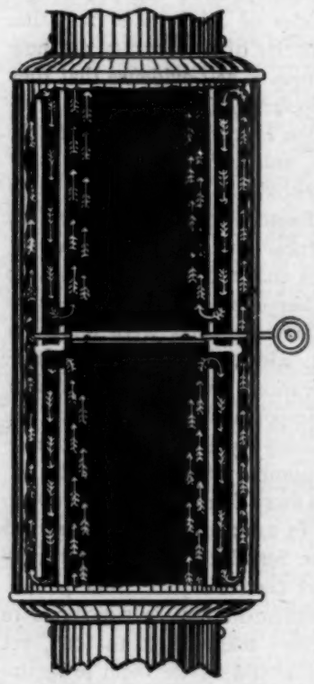
The Bridgeport Crucible Co., Bridgeport, Conn., are manufacturers of the Champion stove clay, claimed to be the only stove lining made of crucible materials, and also to be the best and most refractory lining made. It is packed in 2½-pound, 6-pound and 10-pound pasteboard boxes and also in bulk.

J. P. Lindemann & Sons, Milwaukee, Wis., are the western branch of the Co-operative Foundry Co., Rochester, N. Y., and carry nearly 5,000 shares in stock at all times at Milwaukee of the Red Cross line. The Red Cross base burners for 1903 are very attractive and are splendid sellers. This line includes the Red Cross Royal, Red Cross Signal, Red Cross Garnet and Red Cross Sunbeam. The Red Cross Oaks, Red Cross Victor steel ranges and Red Cross Princess steel ranges are also very popular stoves.

The Independent Register Co., Cleveland, O., send us a circular calling attention to their line of stove pipe radiators. The steel shell in the Independent square radiator is filled with radiating tubes, one and one-half inches in diameter and from seven and a half to eight and a half inches long, according to the size of radiator. These tubes pass from the back to the front of the smoke chamber and are open at both ends. In the rear of the smoke chamber is an air shaft, closed at the top and open at the bottom, which draws the air from the floor where it is always coolest and feeds it to the radiating tubes. On its way to the chimney every particle of the heat and smoke must pass over these tubes, with their great radiating surface, and when the heat and smoke is through with all these tubes and has reached the top of the radiator it is mostly all smoke—the heat has been caught by the tubes, each one of which becomes a separate radiator, and the air passing through them is changed from cold to hot and instead of going out of the chimney, the heat is on its way out into the room; and it keeps at it just as long as there is any fire in the stove. It causes a moderate circulation throughout every part of the room, the corners are as warm as the rest of the room, and the heat isn't all at the ceiling, it's on the floor too—the room is evenly warmed.

REDDY'S FUEL SAVER AND HEATER.

James M. Reddy, 5531 Cottage Grove avenue, Chicago, is manufacturer of Reddy's fuel saver and heater shown in the accompanying cut.



Reddy's Fuel Saver and Heater.

The arrows show the course of the heat. Instead of going up the pipe in one solid volume, and so quickly that little or no benefit is derived from it, the heat is stopped by a damper and forced to the bottom of the fuel saver and heater, thence up the full length of the outer passage; at the top it is turned downward again, and is not finally released until it reaches the openings in the stove pipe just above the damper.

Reddy's fuel saver and heater regulates the draft and causes perfect combustion. In an ordinary hard coal stove fitted with this fuel saver and heater a fire will keep for three days without replenishing. In mild winter weather or in the autumn and spring, when only a little fire is needed, this means a saving of over 60 per cent in your fuel bill.

Reddy's fuel saver and heater is made of No. 20 and No. 24 sheet steel on the inside and the outside is polished steel with ornamental beading and nickel trimmings.

M. & D. HOTEL AND RESTAURANT WROUGHT STEEL RANGES.

The M. & D. Range Co., 96-100 Lake street, Chicago, send us their latest attractive catalogue of M. & D. hotel and restaurant wrought steel ranges. All of this firm's heavy ranges for coal are constructed with

round pot or oblong pot with rounded corners. The ovens are of extra heavy steel plates, firmly anchored in front and back to strong face plates.

The M. & D. double-oven wrought steel range No. 53 has top 30x55 inches, oven 12½x22x13 inches and weighs 935 pounds. It has an oblong fire-pot for coal or a square fire-pot for wood. The top plates have four 8-inch and one 9-inch holes, or eight 8-inch or six 9-inch holes or have solid plates.

Their canopies are nickel-trimmed, polished steel or japanned steel for all sizes of ranges.

One of these catalogues will be furnished the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

"OUR PARDONABLE PRIDE."

Last week a neat looking booklet came to our desk bearing on its cover the title "Our Pardonable Pride." If this cover were not a much daintier job of printing than paper covered novels we might have mistaken this for one of Bertha M. Clay's stories or Mary Maclane's latest. However on turning out the covers we found that this pamphlet was merely a "modest effort" of the Charter Oak Stove & Range Co., St. Louis, Mo.

The pictures of one-half of one molding floor, view of warehouse, works as whole, etc., are very interesting. The goods of this firm with its "53 years of quality" include the Charter Oak steel range, New Glory steel range, Charter Oak steel cook, Glory steel cook, Grand Charter Oak cast range, Grand Charter Oak stove, Royal Charter Oak, Waldorf, New Messenger, Manila, New Mabel, Dainty, Nell, Cinch, Royal Charter Oak base burner, Charter Oak air-tight heater, Hot Blast Oak, Special Oak, Irondale, Charter Oak air-tight wood burners, Charter Oak steel box stove, etc. One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

STEWART STOVES AND RANGES.

The Fuller-Warren Co., Milwaukee, Wis., send us their attractive catalogue of Stewart stoves and ranges. The Regal Stewart steel range has body made of cold-rolled polished steel in natural finish, riveted with cone-head rivets. The draft attachment with lighting and poking door is of the latest construction, giving perfect access to all parts of the grate. The coal feed or broiling door is of extra size, the oven plates are of extra thickness and the oven top is thoroughly protected by asbestos board in addition to a heavy cast protection plate. The oven bottom is amply braced by cast bars to prevent buckling. The oven damper is of an improved construction and very free in operation. The wood feed door is of extra size, being the full width of the fire box. The heavy, removable cast base insures the range being level. The grate is of the duplex-combination coal and wood pattern and can be removed through the front of the range. The nickeled parts include top bands, feed, oven and ashpan doors, name plate, oven door panel, all high shelf and closet supports, edges, name plates, drop shelves and pipe dampers.

The Art Stewart base burner has handsome nickel dome section with reflectors, automatic magazine, inside gas cover, combination shaking and duplex grate, solid fire pot, which can be removed through side doors, screw draft damper, and extra sized flues with horseshoe bottom flue. The nickel plating includes dome section, magazine swing cover, side rails, name plate, screw draft register and complete base. One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

THE SUNSHINE STOVE SHOP.

The Sunshine Stove Shop is the style of a large stove foundry located at Reading, Pa., and operated by the Reading Stove Works. John Kontny, 153-159 Jefferson street, Chicago, is their Western agent, and we are indebted to him for a handsome book entitled "1903 Cooking Goods and Portable Heating Goods Made at the Sunshine Stove Shop."

The Colonial Sunshine range has oven and outside plates protected by inside guard plates. The oven and check dampers are operated from the top of the range on the left or fire end, where most convenient for use, by sliding, patent spring, nickeled knobs. An improved oven ventilating device enables the user of the range to regulate the volume of inflowing and outflowing air at will. The oven doors are rectangular and tin-lined. The shelf is nickeled and raises to level of oven bottom automatically when the door is opened.

The Ruby Sunshine range has a continuous oven and wood-door front, forming, in appearance, a single, harmonious panel. Other features are improved wood grate, large broiler feed-door, heavy sliding oven damper with no damper rods in path of draft over top oven plate, improved and Read check damper. The nickeled parts include front rim of top, outer oven shelf, pedal attachment, name plate, poker, lifter, towel rod, shaker, cup brackets and patent spring slide knobs for dampers and check slides.

The Sunshine Oak has been materially changed for 1904. The loose top nickel ring fits independently of any other part and is removable at will. There is an entire new front with feed door in one part instead of two as formerly. The feed door is fitted with screw check register. A new base section provides for operation of grates from side instead of front, with dust-proof door concealing grate shanks from view. The base door which formerly fitted into front section of skirting is now raised and made to swing from front of base, and this door also has a tightly fitting screw draft register. To conform to other changes there is an entire new cylinder of outside fire-pot, and the feet have been heightened. In every stove a row of brick will be placed on top of fire-pot. The magazine has been lengthened. The skirting is made to mount complete in itself, and carry the base without bolt or screw. The double cast fire-pot lining is made with openings which form a perfect gas generator and smoke consumer.

One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

The Hardware Record.

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Chicago Retail Hdw. Dealers' Assn.
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V.-P., H. E. Gnadt.
Sec., G. R. Lott.
Collector, John Hora.
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Hardware Merchants' and Manufacturers' Assn. of Philadelphia.
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Illinois Retail Hdw. Dealers' Assn.
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2d V.-P., Jos. C. Kirchdorfer, Louisville.
Sec., Paul Wagner, Louisville.
Treas., Henry Heick, Louisville.

Michigan Hardware Association.
Pres. John Popp, Saginaw.
V. Pres., F. M. Brockett, Battle Creek.
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Ex-Com., W. P. Culver, Portland; K. S. Judson, Grand Rapids; J. H. Whitney, Merrill; E. J. Morgan, Cadillac; T. Frank Ireland, Belding; Fred S. Cook, Fowlerville; C. E. Pipp, Otsego; A. Harshaw, Delray, A. J. Scott, Marine City.

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V.-P., H. S. Cleveland, Minneapolis.
Treas., W. E. Barto, Long Prairie.
Sec., M. S. Matthews, Mnpls.
Exec. Com., W. H. Tomlinson, LeSueur; H. S. Cleveland, Minneapolis; F. E. Hunt, Red Lake Falls; Benj. F. Kernkamp, St. Paul; C. H. Hornburg, New Ulm; J. Cowing, Alexandria; C. H. Casey, Jordan; C. F. Ladner, St. Cloud; J. Schmidt, Wabasha; A. T. Stebbins, Rochester; J. McGuire, St. Paul.

Missouri Retail Stove and Hardware Dealers' Association.
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V.-P., E. L. Wachter, St. Louis.
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Ex. Com., J. W. Poland, Carrollton; F. N. Kannsteiner, St. Louis; W. T. Shoop, Richmond.

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Sec.-Treas., T. James Fernley, Philadelphia.
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d V.-P. Alex Meyer, Hastings.
3d V.-P. Frank Hacker, Friend.
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National Retail Hdw. Dealers' Asn.
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V.-P., C. H. Miller, Pennsylvania.
Sec., Treas., M. L. Cor y, Argos, Ind.
Ex. Com, H. G. Cormick, Centralia, Ill.; Sharon E. Jones, Richmond, Ind.; T. F. Ireland, Belding, Mich.; L. Lindenberg, Dubuque, Iowa; A. T. Stebbins, Rochester, Minn.

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Ex. Com., E. E. Lyon, Greensburg; C. N. Savage, California; B. A. Maggine, Braddock; C. O. Shroyer, Dawson.

St. Louis Stove Dealers' Assn.
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1st V.-P., John Donnan, Richmond, Va.
2d V.-P., E. A. Peden, Houston, Texas.
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Texas Hardware Jobbers' Assn.
Pres., J. C. Bering, Houston.
1st V.-P., J. Burnside, Ft. Worth.
2d V.-P., J. Taylor, Sherman.
Sec.-Treas., R. Bell, Weatherford.

Wisconsin Hdw. Dealers' Assn.
Pres., L. Findiesen, Green Bay.
V.-P., H. L. McNamara, Janesville.
Sec.-Treas., C. A. Peck, Berlin.
Ex. Com., J. Kornelly, Milwaukee; E. H. Ramm, New London; H. S. Scofield, Sturgeon Bay; R. Murdoch, Beloit.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 42 to 46 inclusive.

Calkins & Jenkins succeed the Soash Hardware Co. at Swaledale, Ia.

Davis & Potter succeed J. E. Davis in the hardware line at Ames, Ia.

I. Houck, an Anita, Ia., hardware dealer, has sold out to J. E. Bruce.

The Broms Cutlery Co., Alexandria, Minn., are erecting a new plant.

Craft & Davis, Dunlap, Ia., hardware dealers, are building a new store.

Haywood Bros. & Dobbin will rebuild their Jennings, Ind., iron works.

A. Bailey succeeds Bailey & Barker in the hardware business at Diagonal, Ia.

King Bros. have sold their hardware business at Algoma, Ia., to W. W. Jones.

D. M. Bostwock has sold his hardware business at Elkton, Minn., to D. Swenson.

W. A. Trotter has sold his hardware business at Kenneth, Minn., to A. O. Shelby.

O. E. Carlton succeeds O. E. Carlton & Co. in the hardware business at LeRoy, Ia.

Sondag Bros. succeed Striegel & Conrad in the hardware business at Harper, Ia.

The Olds Gasolene Engine Works expect to shortly triple their capacity at Lansing, Mich.

William Manterstock succeeds Wilder & Co. in the hardware business at Six Lakes, Mich.

It is said that Weisman & Co., Pine City, Minn., hardware dealers, are about to sell out.

R. L. Champlain succeeds Champlain & Keene in the hardware business at Aberdeen, S. D.

The Flint Paint Co., Flint, Mich., have increased their capital stock from $15,000 to $25,000.

It is said that Peter Alldren is about to embark in the hardware business at Warroad, Minn.

The J. J. Vollrath Mfg. Co., Sheyboygan, Wis., are erecting a four-story fire-proof warehouse.

Anderson & Swanson succeed Anderson & Syvertson in the hardware business at Peebler, S. D.

E. C. Wright has purchased the hardware business of Favorite & Schermerhorn at Sturgis, Mich.

W. R. Danielson is now a partner in the hardware house of J. P. Johnson & Son, Hendricks, Minn.

The Weiss Hardware Co., Merrill, Wis., have sold their stock of hardware to Norland & Howland.

The Safety Incandescent Gas Machine Co. are a new Detroit, Mich., concern capitalized at $5,000.

The M. R. Manhard Co., Ltd., have sold their hardware business at Newberry, Mich., to James C. Foster.

C. B. Bogge has been admitted as a partner in the hardware business of Otto Falkenheiner, Algoma, Ia.

Robert Flockart has been admitted as a partner in the hardware firm of T. W. Hartness & Co., Bussey, Ia.

The Southern Machine Manufacturing Co., Richmond, Va., will shortly improve its gasolene engine works.

S. M. & E. F. Smith have incorporated the Syd Smith Hardware Co., Birmingham, Ala., capitalized at $20,000.

The Reliable Gas Machine & Mfg. Co. have commenced the manufacture of gas machines at Davenport, Ia.

The Carthage Hardware Co. succeed Brinkley & Co. in the hardware business at Carthage, Mo. This new firm are capitalized at $10,000.

The Nebraska & Iowa Steel Tank Co. have removed from Peabody, Kan., to Omaha, Neb., and have started the manufacture of steel tanks.

Bertram C. Smith, Chas. Kneipp and John W. Bratton are the incorporators of the Safety Powder Mfg. Co., New York, capitalized at $75,000.

The Estes Hardware Co. and the Hopkins Stove & Tinware Co., Birmingham, Ala., have consolidated under the name of the Birmingham Hardware Co.

Freeman Dice, Isaac N. Kerr, Joseph Hayes and Thomas L. Taylor are the incorporators of the Veedersburg Hardware & Furniture Co., Veedersburg, Ind.

The Pacific Hardware Co., Everett, Wash., are erecting a corrugated iron warehouse, one story high, 35x100 feet in dimensions, for the purpose of storing stoves.

The Wilkinson, Shear & Cutlery Co., Reading, Pa., have purchased and consolidated the businesses of the Wilkinson Shear Co. and the Emmert Hartzell Cutlery Co., Ltd.

The Trebert Gas Engine Co. are a new Rochester, N. Y., concern capitalized at $50,000. Henry L. F. Trebert, J. G. Wagner, Jr., and Thomas Corkhill are the incorporators.

On Aug. 29 a fire, supposed to have been caused by spontaneous combustion, did damage to the extent of $100 to the building occupied by the Kruse & Bahlman Hardware Co., Cincinnati, O.

J. N. Biddle, 6049 Ellis avenue, Chicago, is offering the trade some exceptional bargains in Standard cash registers, second-hand registers, cash register paper and duplicating sales books.

The Buckeye Gas and Gasolene Engine Co. are a new Aurora, Ill., concern capitalized at $20,000 to manufacture gas and gasolene engines. Peter Michels, Harry J. Cooper and O. J. Wilson are the incorporators.

The Weber Gas Producing Co. of Mexico are a New Mexico City concern capitalized at $500,000. The stock is largely held by those interested in the Weber Gas and Gasolene Engine Co., Kansas City, Mo.

Elvin H. Meade, manager of the Specialty Hardware Co., Detroit, Mich., died on Aug. 29th from heart failure at his residence, 318 Howard street, that city, after an illness of a little less than three weeks. He leaves a widow and one son.

John R. Davis, H. W. Simonds and L. M. Barnes are the incorporators of the New Britain Hardware Co., Hartford, Conn., capitalized at $14,000 for manufacturing and dealing in all kinds of hardware, manufacturers' and builders' supplies.

Mayer & Co., Philadelphia, are makers of the Gold Medal files which have been awarded the Elliott Cresson medal for excellence. The makers of these files claim they use the best steel, have the best methods of tempering and pay the highest wages of any file manufacturers.

The Nicholson File Co., Providence, R. I., are manufacturers of an extensive line of files and rasps which have a national reputation. Their brands include the Nicholson, Kearney & Foot, Arcade, American, Great Western, McClellan, Eagle, J. B. Smith, "X. F." and Gold Medal.

The G. & H. Barnett Co., Philadelphia, are justly proud of the substantial recognition that has been accorded their Black Diamond files and rasps, which have received twelve medals at International Expositions and have held a deserved high place in the affections of the trade for years.

The Fred J. Meyers Mfg. Co., Hamilton, O., are sole manufacturers of the genuine Hunter's sifter, which is the only sifter with a loose cap on the handle, so as to clean out the flour that accumulates in it while the sifter is in use. It is a combined mixer, scoop, measure, dredger, rice washer, pumpkin, tomato, wine, starch and fruit strainer.

The Plume & Atwood Mfg. Co., 199 Lake St., Chicago, New York, Boston and San Francisco, are offering the trade sheet brass, all tempers, brass and bronze drill rod, brazed and seamless tubing, brass and copper wire, German silver sheet and rod, Eagle brand copper rivets and burrs, Eagle brand brass escutcheon pins, brass butts, desk, narrow, broad, middle, ball tip and water closet, brass and iron jack chain, brass safety chain, etc.

The American Cutlery Co., Chicago, are makers of the American family scale, which is made of steel with tin or brass scoop top. It is beautifully enameled, ornamented and striped. It weighs 20 pounds by ounces and occupies but little space. It is light and easily moved. It can be regulated by turning the brass screw on top. It is always ready and easily understood. It is a convenient scale to use and has no weights. Every scale is examined before leaving the factory and is warranted to be correct.

J. M. Gagan & Co., 270-280 Dearborn street, Chicago, are manufacturers of the Paragon cylinder washer, which has a revolving cylinder inside the tub, operating on the same principle as all laundry machines. The tub and all parts coming in contact with water are galvanized steel, which eliminates the possibilities of the tub ever leaking, it is claimed. There are no heavy gearings to get out of order. It can be operated by a seven-year-old child, and it will wash 12 shirts or their equivalent in 15 minutes.

Richard W. Montross, Galien, Mich., is meeting with marked success in the sale of his specialties, which include the Excelsior carpet stretcher and tack hammer combined, Valley reversible clothes bars, Excelsior coat and hat racks, Wayne hammock stand and

canopy, hammock spreaders, Extra hay and manure fork handles, hoe rake and broom handles. He advises us in a recent favor that the sales of the Excelsior carpet stretcher within the past year were over 1,000 dozen, one Chicago jobbing house selling 150 dozen, another 50 dozen and a third 25 dozen; while one St. Louis jobbing house sold 100 dozen and another 50 dozen.

HARDWARE TRADE IN NEW ORLEANS.

The New Orleans States of Aug. 31 says: "The hardware business during the past year has been greater in volume than during any previous year in the history of the business, so far as New Orleans is concerned.

"And as for the general conditions for the coming year, why they are favorable, to say the least. In the cotton territory the reports are that while the crop is light, the prospects are very flattering for a big hardware trade this fall. The corn crop is practically made, while the rice crop is ready to harvest, and it seems almost certain that it will be a crop of 5,000,000 bags. The cane crop will perhaps only be a three-quarter crop. The lumber business, on the other hand, is booming, and a great many mills are running at their fullest capacity. The higher price of cotton is stimulating buyers and all around we anticipate a larger fall trade than we have ever had during any previous fall season.

"The farmers of the South now demand new and improved farming machinery for all kinds of crops, and more machinery of this description was sold last year in the South than during any other two previous years since the Civil War and more will be sold the coming year than was sold last. The tendency all the time is for a better class of farming machinery, and a better class of hardware is in demand than formerly, with the trade increasing in order for a still better class. Just now there seems to be nothing too good for those who buy hardware. The people now are growing more luxurious rapidly. The sales in the higher classes of hardware have improved throughout the trade territory during the past year to a very marked degree."

SOME SWELL SUMMER SHOOTING.

At an Atlanta, Ga., tournament Aug. 8 high average was won by C. W. Phellis of the Hazard Powder Co., J. W. Hightower of the Peters Cartridge Co. winning second average, both gentlemen using Peters' Ideal shells made by the Peters Cartridge Co., Cincinnati, O.

At Glen Rock, Pa., Aug. 6 and 7, Neaf Apgar, the Peters expert, was high on the first day, shooting a 96½ per cent gait, Apgar and Luther Squires of the Dupont Powder Co. tying for general average with a fraction over 94 per cent.

On Aug. 5 and 6 at Brownsville, Pa., R. S. Denniker won high amateur average, using Ideal factory-loaded shells and Dupont powder.

At Hillvale, Pa., Aug. 19 and 20, high average was won by Jas. T. Atkinson with the same combination.

THE "BEST" TANK HEATER.

The Sterling Foundry Co., Sterling, Ill., are manufacturers of the "Best" tank heater shown in the accompanying cut. This heater is cast in one piece and is made from the best grade of cast iron. It has solid cast shell with no seams or joints to leak. It is provided with a grate and ash pan. The ashes can be removed without taking the heater from the tank. It is made in two sizes. One size is 17 inches in diameter, 24 inches high and weighs 200 lbs. The other is 13 inches in diameter, 24 inches high and weighs 145 lbs. This firm are meeting with marked success in their sales of their specialties, which include this tank heater and their japanning oven. They would be pleased to send a catalogue to the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

The "Best" Tank Heater.

NEW SASH PULLEYS.

Fred F. Bischoff & Co., Grand avenue and Robey street, Chicago, are manufacturers of the Chicago all-steel sash pulley shown in the accompanying cut. This pulley is of the same size and dimensions as the regular cast iron pulley, which enables the sash-maker to use the same tools and devices to place pulley in position.

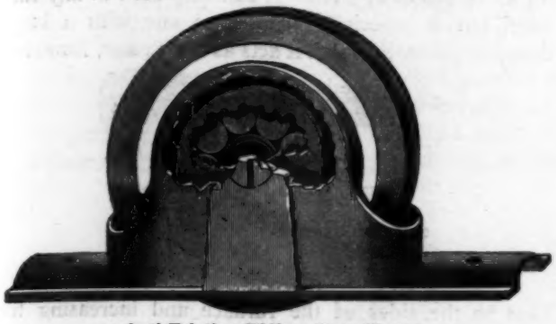
The makers are selling this steel pulley at an attractive price. The pulley is stamped from the best open-hearth steel and special attention is paid to the wheel bearing, which runs smooth and easily.

The manufacturers took advanced orders for over 50,000 pulleys before dies were completed, and advise the trade to write to their jobbers concerning this pulley.

New Sash Pulleys.

ANTI-FRICTION SLIDING DOOR SHEAVE.

The accompanying cut shows the anti-friction sliding door sheave, with steel roller bushing, offered the



Anti-Friction Sliding Door Sheave.

trade by the Stowell Mfg. & Fdy. Co., South Milwaukee, Wis. The hub of the wheel revolves within a set of case-hardened steel rollers. The parts are all accurately fitted by lathe work, insuring an easy and noiseless motion, with great strength. The friction being that of rolling surfaces, only the sheaves require no oiling. It is very simple in its construction, and there is no tendency to get out of order. It is strongly made and handsomely finished.

"YELLOW" ADVERTISING.

The Jos. Dixon Crucible Co., Jersey City, N. J., are an old established, substantial house one would never suspect of "yellow" advertising. However, they issue a circular stating that "Dixon's black lead crucibles were the first reliable melting pots ever made, and have now been in the market 30 years." The "yellowness" of the circular making this statement is legitimate as it is due to time and not a morbid sensationalism. The fact is that this circular was issued in 1848 and 55 years have caused it to turn color. This firm are, of course, as justly proud of their standing 55 years ago as of that they enjoy to-day.

WILL MEET IN ATLANTIC CITY.

November will soon be here and with the events of interest it brings in its trail the chief interest as far as hardwaredom is concerned centers on the ninth annual convention of the National Hardware Association, which will be held in Atlantic City, N. J., Nov. 18, 19 and 20. The official headquarters will be at the Hotel Rudolph.

Secretary Fernley advises us that never before have so many rooms been engaged so long in advance of the holding of the sessions. Jobbers and manufacturers have liberally signified their intentions of being present, and in almost every instance will be accompanied by ladies, for whose entertainment special arrangements will be made. The American Hardware Manufacturers' Association will meet simultaneously with the jobbers' association.

The Hotel Rudolph, where the official headquarters of the association will be held, is now open all the year, although it has always heretofore been closed during the winter season. This new arrangement will doubtlessly prove pleasing in the case of delegates who desire to stay a few days after the close of the convention.

BUSINESS CHANGES.

NEW FIRMS.

Blue Mounds, Wis.—Bey & Mullen.

Rockdale, Tex.—The J. E. Codfield Hardware Co.

Arcadia, Okla.—W. H. Oder.

CHANGES.

Elkton, Minn.—D. M. Bostwick is succeeded by D. Swenson.

Allenville, Ill.—Oscar Hughes succeeds John R. Martin.

Macomb, Ill.—W. E. Morrow and J. E. Long succeed Edgar Avery.

Bussey, Ia.—Robt. Flockhart has taken an interest in the firm of T. W. Hartness & Co.

Geneva, Neb.—C. S. Meredith is succeeded by E. D. Lee.

Gibson City, Ill.—Francis Leonard succeeds Hill Bros.

Osceola, Neb.—Chas. Jockish succeeds Geo. E. Brighan.

Britt, Ia.—F. K. Willis has purchased the Iverson hardware stock.

Ames, Ia.—Davis & Potter succeed J. E. Davis.

Depere, Wis.—Schueler & Lawrenz are succeeded by Goemans Bros.

Fremont, Neb.—M. H. Felt has purchased a half interest in the firm of L. F. Holloway & Co.

Poseyville, Ind.—F. M. Smith is succeeded by Walt Endicott and J. W. Hawkins.

Le Roy, Ia.—O. E. Carlton succeeds O. E. Carlton & Co.

Smithville, Mo.—Ernest Carver succeeds Douglas Carver.

Creston, Neb.—E. E. Eggleston and George Wagner succeed Florer & Co.

Fortville, Wis.—Frank Lowry succeeds Leonard Klatt.

Sac City, Ia.—W. S. Young & Son are succeeded by W. A. Ruff.

Osage, Ia.—Greig Bros. are succeeded by Mr. Ross.

Eaton Rapids, Mich.—Spears & Scofield succeed E. F. Knapp.

Keswick, Ia.—R. B. Dunshee succeeds Wilson Van Fossen.

Ironwood, Mich.—The Ironwood Hardware Co. have made an assignment.

Nerstrand, Minn.—Edward Sherwin succeeds H. M. Jones.

Decatur, Ind.—Brittson Bros. are succeeded by Brittson & Meyers.

Chicasha, Ind.—The Chicasha Hardware and Implement Co. are succeeded by R. and W. I. Pierriot.

Beltrami, Minn.—Morris & Daughenbaugh are succeeded by John Daughenbaugh.

Christine, N. D.—Gilbert Johnson succeeds H. O. Rund.

Tyndall, S. D.—Thompson & Koehn are successors to Bromwell & Jackson.

Portland, Ore.—The Muck-Dunning Hardware Co. succeed the Pier Hardware Co.

Ozona, Tex.—Rawls & Burdick have sold out.

Brandidge, Ala.—Helms, Lee & Co. are succeeded by Haisten & Co.

Dallas, Tex.—H. W. Thornhill & Co. succeed Millard Storey.

Coleman, Tex.—D. A. Paddleford is succeeded by Paddleford & Son.

MISCELLANEOUS.

Millbank, S. D.—Karl & Denkman are erecting a new building.

Orchard, Neb.—James Alexander burglarized; loss $600.

Athens, Tenn.—Bayliss & Moody have just moved into new quarters.

Hidalgo, Ill.—Bowers & Co., fire loss $4,000.

Lake City, Minn.—W. E. G. Loefflet will erect a new store.

Fairmont, Minn.—E. W. Dushinske has leased a new building.

STOPPAGES.

West Milford, W. Va.—W. E. Burnside has sold out.

Heating and Ventilating

Wm. N. Best, Val Peyton, Frank Monoghan and A. L. Hawes are the incorporators of the W. N. Best International Calorific Company, Los Angeles, Cal., capitalized at $1,000,000.

Sealed proposals will be received at the office of the Supervising Architect, Washington, D. C., until 3:00 p. m. Sept. 16 for the low pressure steam heating apparatus for the United States Courthouse and Postoffice building at Cumberland, Md.

The Quaker Mfg. Co., Chicago Heights, Ill., send us a circular calling attention to some of their Quaker furnace specialties. The Quaker side wall registers increase the efficiency of the furnace by using less pipe. They are ornamental, clean and healthy. They do away with dust and dirt being swept into registers and then carried all over the house by the circulation of air. The Quaker patent door lift works noiselessly, never burns the fingers, stays in any position left at all times and operates the door easily.

The Sayre Stamping Co., Sayre, Pa., are manufacturers of the Uncle Sam damper. The handle is enameled wood, will not heat, rigidly clamped and cannot come off. The spring is not affected by heat. The stem is a steel rod, all one piece and nothing to fall apart; pointed and easily driven through the pipe. The damper plate is made of cold rolled pickled steel, corrugated to stiffen it and to prevent warping. The lightness and strength of these dampers make them very desirable for use in furnace pipes.

The S. M. Howes Co., 40-46 Union street, Boston, Mass., send us a circular describing their Yankee all-steel damper and other stove specialties. This has steel rod flattened and turned over handle, enameled wood handle, spring and washer. It is made of ¼-inch cold-rolled steel rod and can easily be driven through pipe, making small holes of the same size on both sides. The No. 1 Boston elbows are made with but one seam that shows and the throats are long. The middle sections of this elbow are bulged so as to make a handsome rounding effect.

The Tuttle & Bailey Manufacturing Co., New York, Chicago, Boston and Brooklyn, were established in 1846 and occupy a commanding position in the register trade. They carry 500,000 registers, fans and borders in stock, their line of registers including the T. & B. Brilliant, T. & B. Florentine, T. & B. Persian, T. & B. Indian lattice, T. & B. Special Side Wall, T. & B. Convex Lattice, T. & B. Empire and T. & B. plain lattice. They would be pleased to send one of their latest catalogues to the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

SMITH'S HOT WATER SPECIALTIES.

The Chas. Smith Co., 122 Lake St., Chicago, are manufacturers of a line of hot water specialties, including Smith's "Little Giant," shown in the accompanying cut. This is made in four sizes and can be placed in any furnace. It has no joints and may be used to heat from one to four rooms, or in heating tanks.

Smith's Circular Giant is made in six sizes from 14 to 24 inches in sizes. It can be placed in any furnace, but is especially adapted to one with a large drum or dome, in which it acts as a deflector, throwing

heat to the sides of the furnace and increasing the capacity very materially. It will heat from one to eight rooms with hot water and is also effective in heating large tanks. It has no joints.

Smith's Maltese heater can be used in any surface-burning stove or furnace. It is made in seven sizes.

MEET AT MOMAUGUIN.

Momauguin, a pretty Connecticut summer resort, was the scene of a summer meeting of the Connecticut Retail Hardware Dealers' Association on Aug. 26. The following members of the association were present:

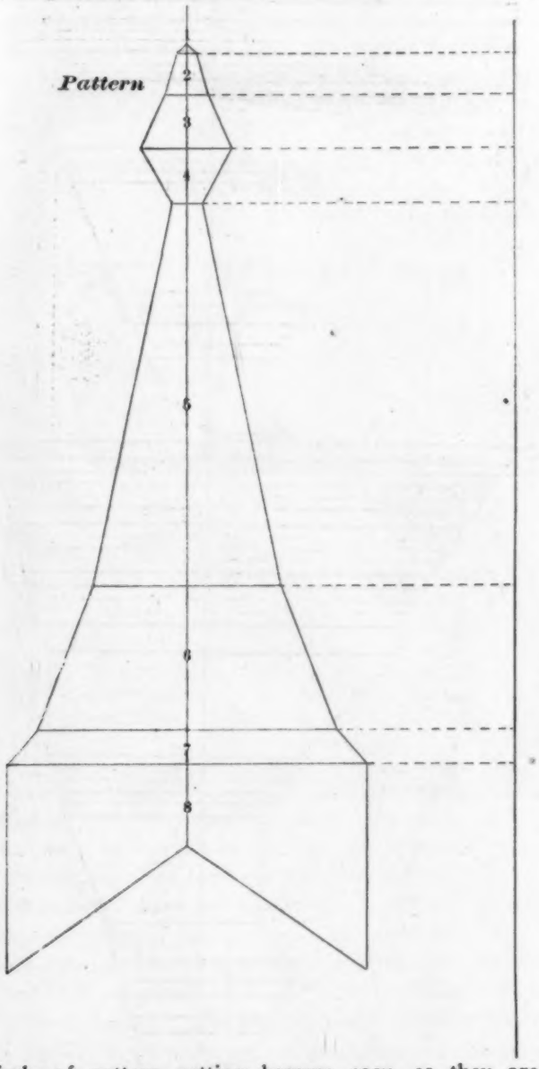
A. H. Abbe, A. H. & E. W. Abbe, New Britain, Conn.
D. K. Allen, Greenwich.
Geo. H. Baker, the Geo. H. Baker & Co., New Haven.
Geo. M. Baldwin, T. Hawley & Co., Bridgeport.
R. I. Barber, Rockville.
George J. Bassett, the John E. Bassett & Co., New Haven.
J. C. Bidwell, J. C. Bidwell & Co., Hartford, Conn.
Eli C. Birdsey, Birdsey & Raven, Meriden.
Arthur H. Bishel, Smith & Bishel, Middletown.
Geo. D. Buck, John M. Page & Co., Naugatuck.
W. H. Burchell, the N. T. Bushnell Company, New Haven.
Geo. I. Clapp, Clapp & Treat, Hartford.
D. N. Clark, Shelton.
Lewis B. Crosby, the G. M. Williams Company, New London.
W. A. Church, the F. Hallock Company, Derby.
R. F. Davis, Jaynes Hardware Company, Greenwich.
W. B. Dickerman, Dickerman Hardware & Supply Company, Wallingford.
S. L. Ewald, Lyon & Ewald, New London.
Robert Gardner, the F. Hallock Company, Derby.
F. William Hallock, F. Hallock Company, Derby.
Henry S. Hitchcock, F. F. Hitchcock, Woodbury.
W. F. Hueston, D. N. Clark, Shelton.
F. W. Jaynes, Jaynes Hardware Company, Greenwich.
Fred D. Jordan, Jordan Bros., Willimantic.
Halsey W. Kelley, the John E. Bassett & Co., New Haven.
R. C. Lightbourn, the Lightbourn & Pond Company, New Haven.
Henry Lockwood, Lockwood & Palmer, Stamford, Conn.
R. E. Page, Hartford.
John M. Page, John M. Page & Co., Naugatuck.
Frank W. Palmer, Lockwood & Palmer, Stamford, Conn.
Jas. D. Phelps, F. S. Bidwell & Co., Windsor Locks.
Geo. H. Pond, the Lightbourn & Pond Company, New Haven.
I. C. Treat, Clapp & Treat, Hartford.
Frank T. Terry, T. P. Terry & Son, Ansonia.
E. M. Walsh, R. B. Bradley Company, New Haven.
R. T. Warner, the W. A. Warner Bros. Company, New Haven.
S. L. Way, Way Hardware Company, Hartford.
Chas. L. Way, Way Hardware Company, Hartford, Conn.
D. B. Wilson, the D. B. Wilson Company, Waterbury.

Tinshop

MITER PATTERN CUTTING.

To The American Artisan.

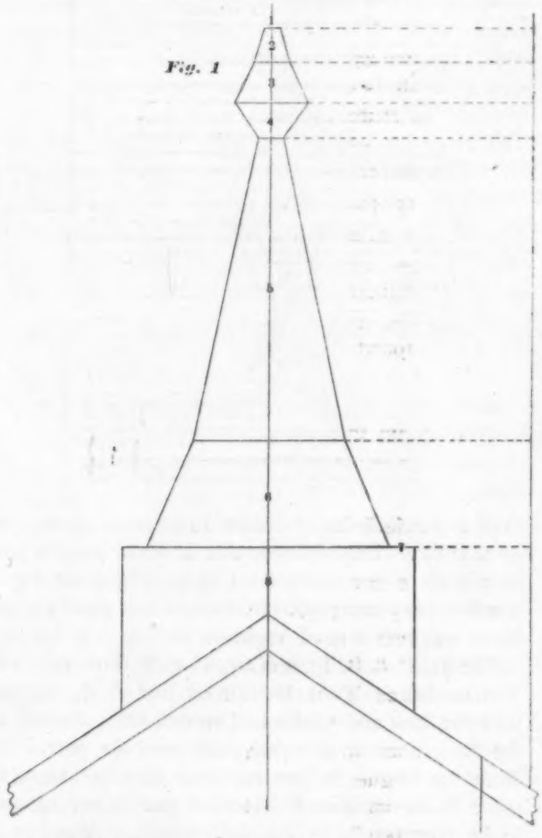
Tinners frequently have occasion to cut patterns for miters. The ordinary eave trough is an example, as is also a right-angled elbow, which is simply a miter of a cylinder. When one understands the principles many



kinds of pattern cutting become easy, as they are founded on the same principles. Perhaps the readers of The American Artisan have heard the story of the boy who commenced to study his arithmetic at the back end, so it would grow easier all the time as he went toward the front. It is just the same with the person who understands miter cutting. All kinds of elbow and T-joint patterns are as easy to cut as the pattern of a joint stovepipe.

The first step is to get the shop rule style out of one's mind and the system of measuring the various lines in. I am frequently asked what rule I have for cutting a certain kind of pattern. My answer always is: "I have no rule or rules for cutting any kind of a pattern except it is to make a drawing of what is to be done and work from the drawing. This rule does not sound very loud, and if the readers who are not in the habit of working from drawings will try the experiment a few times they will be convinced of the value of the system. They will find out they cannot very well make a drawing of anything until they fully understand it. The making of the drawing impresses every point on the mind. I have noticed many times that when I made a drawing of anything and stuck to it my work came out all right, but as soon as I went into the cut and try business there was apt to be a failure. A mechanic should stick to his plan as closely as a printer to his copy. I think it was Benjamin Franklin whose advice to printers was, "Follow copy, even out of a fourth story window."

We will suppose a pattern is to be cut for a church steeple, of which Fig. 1 is the plan. By measuring the profile or shape the stretchout or length of material is obtained. The next step is to measure from the center line each way to the profile and transfer these measures to the pattern. It is evident that the parallel lines must be the same length on Fig. 1 and on the pattern. The principal point to be noticed is in No. 7, the difference between profile and pattern. Fig. 2 is the outline or profile of a face. This example is introduced to show that it is as easy to cut the miter pattern of an irregular shape as one composed of parts of circles



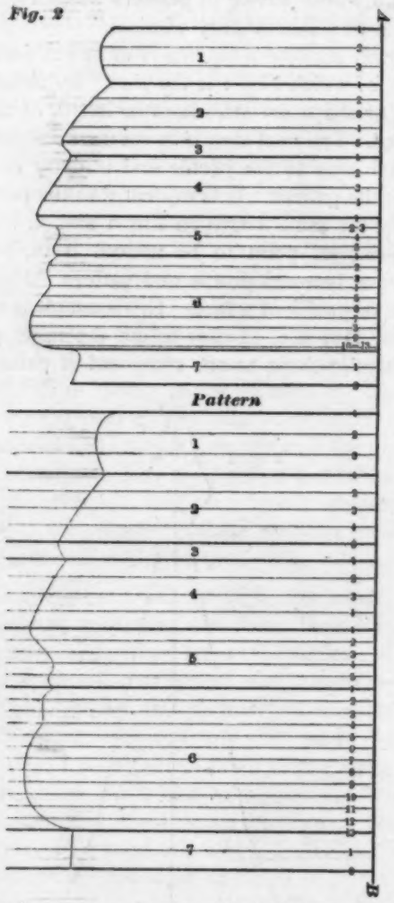
and straight lines. First obtain the stretchout of the profile. The spaces between divisions 1, 2, 3, etc., as shown by heavy lines, are divided into any convenient number of parts, as is the stretchout, and the distance from line A B transferred to corresponding lines on stretchout or pattern.

I should be very much interested in seeing a person cut the pattern of such a profile by any square and dividers shop rule, yet it is just as easy to cut the

miter pattern of a profile of the human face as of an elbow, providing one understands the principles upon which such work is based.

Fig. 3 is the profile of a cornice. The pattern is to be cut for a corner, or return miter, and for joining the cornice to the slanting or mansard roof of an adjoining building. The return miter shows the profile of the cornice, but where the cornice joins the roof a straight line only is shown. The cutting of a miter pattern to a line puzzled me not a little when I first commenced to cut miter patterns, and I will remark, for the encouragement of beginners, that I did not

Fig. 2



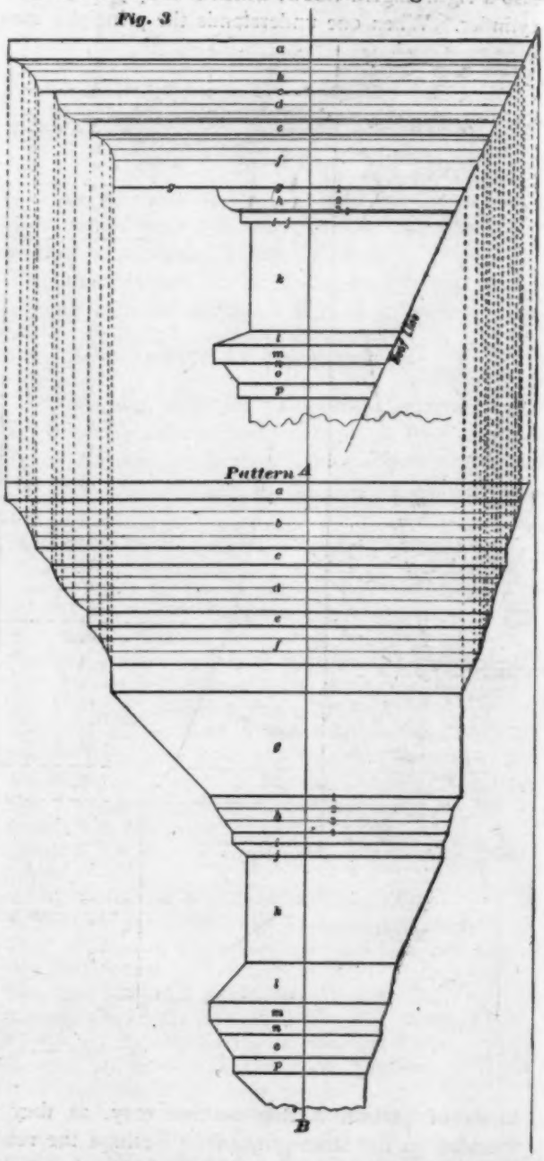
have any AMERICAN ARTISAN to help me or any book or anything; hardly knew that a miter pattern could be cut on a flat surface. I was obliged to dig the whole thing out myself. Perhaps it was good exercise, but it was rather hard work.

The pattern of Fig. 3 is cut so as to show two ways. The stretchout is marked off on line A B, the space between lines and profile and stretchout is divided into the same number of equal parts, and the dotted lines from the profile to pattern show that the same distance from the line A B to the profile are supposed to be transferred to the corresponding lines on the pattern by the dividers, showing the second way, on the other side of line A B the same course is pursued. The distance from line A B to the roof line is transferred to the pattern. K is the same on profile and pattern. A person standing under the cornice and looking up, would see J and not K; a K and not J. The pattern under the profile is such as would be used for a square, or four-cornered box or vase. The pattern of an eave trough can be cut the same way. D is the pattern and profile of a quarter circle, or one-half of an eave trough, less the bead.

Perhaps the best way to study mitre cutting is to get some pieces of paper to fit over the wood. That was all the help I ever had; simply a pocket full of pieces of molding that I picked up from the floor of a carpenter shop.

In the above I have avoided lettering the lines as

Fig. 3



much as possible, so as to have the drawings plain. Any questions arising may be answered by taking a pair of dividers and measuring the profiles or the patterns. The

Lincoln, Neb., August 31, 1903. "POSTED."

TIN AT TINTON.

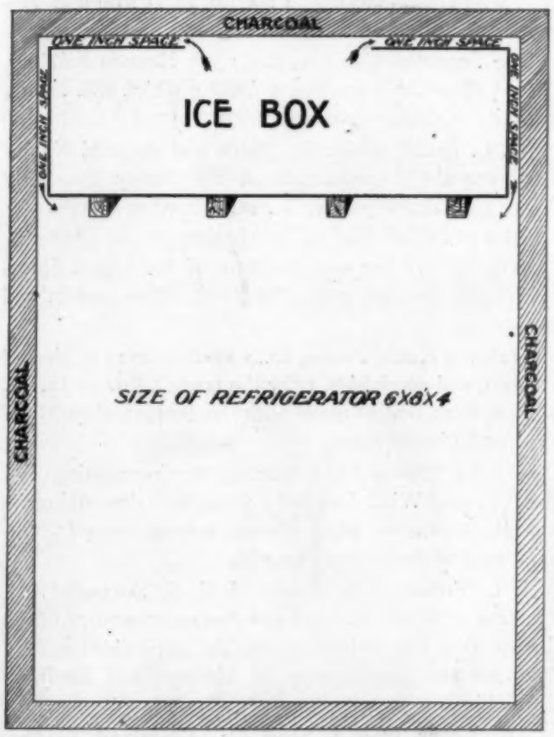
The Dell Rapids, S. D., Tribune of Aug. 29th says: "The machinery has commenced to arrive for the large concentrating plant which is to be erected by the Tinton Tin Company at Tinton in the Bear Gulch district. This is the company that is opening a vein of tin bearing ore over 100 feet in width. The company is financed by Chicago and other eastern capitalists,

and it now appears there will be no question whatever about the Black Hills being on the market with tin in the course of the next twelve months."

A REFRIGERATOR THAT SWEATS.

To The American Artisan.

Our butcher has a refrigerator which causes him considerable trouble by sweating, thereby dripping on meat and causing some to spoil. Would like to know the reason of sweating and how to prevent same. The refrigerator is peculiarly constructed according to my ideas of the working of cold air, but as I don't pre-



tend to know very much about refrigerators and have had very little work in that line, consequently would like the opinion of some one who has done work in that line before I make any alterations in said refrigerator. The refrigerator has no means of ventilation, only a one-inch space between box and wall left open on sides and back, open only at top of box as will be seen by inclosed diagram. The front of box is nailed to wall of refrigerator. I hope to hear from some of the craft.

Cove, Ore., Aug. 26, 1903. B. E. Anderson.

CATALOGUE OF SHEET METAL GOODS.

The Galesburg Cornice Works, Galesburg, Ill., send us their attractive red and black catalogue No. 5. Their specialties include knocked-down skylights, Childer's patent strainer cut-offs, stamped metal tip shingles, stamped metal ridge tiles and Jersey cream separators, while their line includes cornices, crestings, finials, skylights, window caps, eaves trough, conductor pipe, steel ceilings, galvanized sheets, tin and terne plates, corrugated sheets, steel brick siding, furnace pipe and registers and tinshop supplies. The Jersey cream separators are made of XX charcoal tin plate, handsomely painted in red enamel, decorated and lettered in an artistic manner, with bottoms concaved so that all cream drains to the faucet. The faucets are brass, nickel-plated and the parts can be easily taken apart, washed and scalded.

This firm's adjustable metal ridge tiles are stamped from tin, galvanized iron or copper. Their length is 14 inches and their covering length is 12 inches.

Their adjustable metal tip shingles are stamped from tin, galvanized iron or copper. They are highly ornamental, very durable and easy to lay.

Their skylights are of the "Hayes" pattern rafter bar type combined with an improved curb and ridge bar, and are shipped knocked-down. The sheet metal used is galvanzied steel, but this firm also make frames of sheet copper. The "Childers" patent strainer cut-off is made of the best IX extra coated terne plate. The strainer is in operation either way the valve is set and leaves, sticks, bugs, etc., are thrown out by the force of the water. One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in The American Artisan."

WELSH TIN PLATE MILLS CLOSE.

A press dispatch states that on Aug. 29th all the South Wales tin plate works controlled by the Employers' Association closed for an indefinite period, in consequence of a wages dispute of long standing, based on the method of payment for certain classes of plates, about 25,000 men being affected. The employers insisted that their demands be accepted unconditionally and the workmen refused to agree to this. The lockout affects four-fifths of all the mills. About a dozen non-associated works continue in operation. The locked out men will be supported by the unions. It is anticipated that the steel workers of the district will strike in sympathy with the tin workers.

LISK'S FOUR-COATED ENAMELED STEEL WARE.

The Lisk Mfg. Co., Ltd., Canandaigua, N. Y., send us a handsome illustrated catalogue devoted to their Lisk's four-coated enameled steel ware and their Lisk's new gray Imperial ware. These goods are strictly high grade in every particular and are absolutely pure and free from all adulterations. They are made of the finest quality of steel, coated with four coats of Lisk's new enamel, of great adhesiveness and durability and double glazed.

The Columbus Food Laboratory, 103 State street, Chicago, tested these utensils on Jan. 31 last and reported as follows on the quality of the enamel:

"We beg leave to report the results of analyses of a sample of enameled iron cooking utensil. This sample was given a very critical test as to its ability to expand and contract under heat, and came from the test without a check. An attempt was made to get a watery extract of the enamel by treating it in the finely pulverized state with boiling water for a considerable time. It remained completely insoluble, thus proving that it could not be attacked by the water in the process of cooking. The dish was treated with such a per cent of acetic acid as is found in ordinary vinegar, without corrosion. An examination for poisonous

metals, such as arsenic, antimony, etc., was made. Nothing of that nature was found. An extract of the enamel was made and administered to a guinea pig. The animal remained normal and no disturbance of the physiological functions could be detected. Conclusions: (1) The enamel has exceptional adhesive qualities. (2) It will expand and contract under heat without cracking. (3) It is entirely insoluble in water. (4) Organic acids, such as are found in tomatoes, vinegar, spices, etc., will not attack the enamel. (5) It contains no poisonous or otherwise harmful metals. (6) It contains nothing that could interfere with the normal physiological functions of the body."

One of these catalogues will be forwarded the trade on application. When writing for same kindly add: "Saw it in THE AMERICAN ARTISAN."

NOTES AND QUERIES.

PASTING PAPER ON TIN.

From "Reader," Holland, Mich.

Would like recipes for a paste for pasting paper on tin.

Ans.—A paste for pasting paper on tin is composed of the following: Dissolve rye flour in a solution of caustic soda, dilute with water, and in so doing, stir all the time. To this paste add Venetian turpentine—a few drops to each half pound of flour.

Other recipes are: Four parts shellac, 2 parts borax, 30 parts water; boil until the shellac is dissolved. Add four ounces drammar varnish to 1 pound of tragacanth mucilage. Balsam of fir 1 part, turpentine 3 parts; use only for varnished labels. Butter of antimony is good to prepare the tin for the label. Venice turpentine added to good starch paste makes an excellenting mounting medium.

INVALIDS' TRICYCLES.

From Scammon & Son, Friend, Neb.

Where can we buy invalids' tricycles?

Ans.—Fay Mfg. Co., Elyria, O.

ROBINSON CORNICE BRAKE.

From Himmel & Fitzsimmons, Parsons, Kans.

Where can we buy the Robinson cornice brake?

Ans.—J. M. Robinson & Co., Cincinnati, O.

TRICYCLES.

From Scammon & Son, Friend, Neb.

Who makes tricycles?

Ans.—Ames Sword Co., Chicopee, Mass.; Carlisle Mfg. Co., South Bend, Ind.; Chicago Chair & Wheel Co., 273 Wabash avenue, Chicago, Ill.; Fay Mfg. Co., Elyria, O.; Gendron Wheel Co., Toledo, O.; Gormully & Jeffrey Mfg. Co., 226 North Franklin street, Chicago, Ill.; Marlin Fire Arms Co., New Haven, Conn.; Overman Wheel Co., Chicopee Falls, Mass.; G. N. Pierce Co., Buffalo, N. Y.; Pope Mfg. Co., Boston, Mass.; W. S. Reed & Co., Leominster, Mass.; Chas. F. Stokes & Sons, Inc., 293 Wabash avenue, Chicago, Ill.; Toledo Metal Wheel Co., Toledo, O.; Tricycle Mfg. Co., Springfield, O.

ITEMS.

Nash & Power are a new firm of St. Thomas, N. D., tinners.

W. Bates Wood is interested in a new company which will establish a plant for the manufacture of metal ceilings, sheeting, roofing, etc., at Wheeling, W. Va.

Denkman & Carl are a new Corona, S. D., hardware concern.

John Snadely has sold out his roofing business at Spring Mills, Pa.

A receiver was appointed on Aug. 31 for the Steel Brick Siding Co., Fulton, Ill.

The Slatington Slate Co., Slatington, Pa., are making important additions to their mechanical equipment.

Kimmel & Fitzsimmons, Parsons, Kans., are a new firm who are embarking in the tin, sheet iron and copper work business.

The Southern Can Co., Ltd., 305 Hennen building, New Orleans, are erecting a factory which will have a capacity of 60,000 cans a day.

W. L. Faulk, Albert N. Theile and Bernard Naumberg are the incorporators of the Purity Enameled Ware Co., Brooklyn, N. Y., capitalized at $1,000.

Silas M. Ford, Earl M. Goldsborough and Frederick H. George are the incorporators of the Union Roofing & Manufacturing Co., St. Paul, Minn., capitalized at $50,000.

Stuber & Kuck, Peoria, Ill., manufacturers of pierced tinware and specialties, offer the trade a line of IXXX special wash boilers made with flat bottom, Royal handles and pierced cover.

The La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis., handle a complete line of eaves trough, conductor pipe, elbows, mitres, hangers, cutoffs, roofing and siding material.

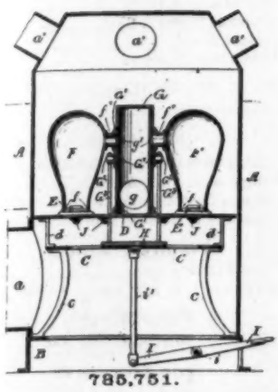
J. L. Fisher, J. L. Bonar, S. S. S. Spraag, C. R. Goetz and W. P. McGrail are the incorporators of the Fisher Mfg. Co., Wheeling, W. Va., capitalized at $50,000, for the manufacture of roofing and hardware specialties.

The Garry Iron & Steel Co., Cleveland, O., are manufacturers of corrugated iron and steel for roofing and siding. Their sheets have uniform corrugation in size and shape. They also manufacture eaves trough, conductor pipe, galvanized sheets, tin plates, mortar colors, roof paints, etc.

The Amalgamated Sheet Metal Workers' Union of Lynn, Mass., submitted a new proposition to the employing sheet metal workers which went into effect Sept. 2. It states that eight hours shall constitute a day's work, that time and a half shall be paid for all overtime until 12 p. m. on shop work and double time after that, and double pay for outside work after hours and on Sundays and holidays. The new schedule of wages is set at $3.25 per day.

The Fred J. Swaine Co., Seventh and O'Fallon streets, St. Louis, Mo., manufacturer of presses, dies and sheet metal tools, advises us that at present their business is very prosperous and the outlook from present inquiries assures them that conditions will continue so for the balance of the year. They have lately secured some very nice orders from all sections of the country, and while there are fewer large contracts on the market than at some former seasons, the multitude of small orders makes the aggregate volume of orders higher than ever.

NEW PATENTS.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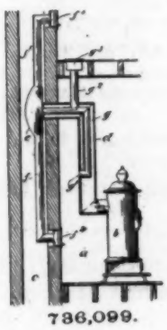
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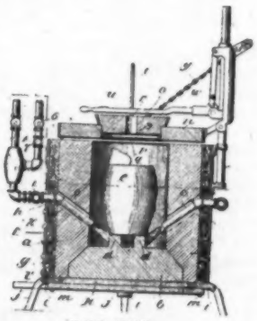
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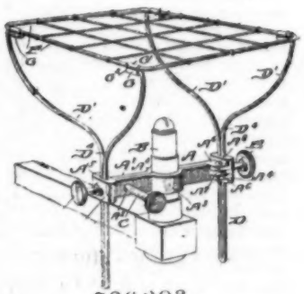
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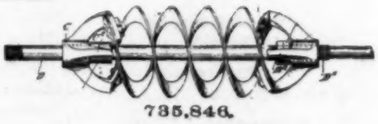
735,846.

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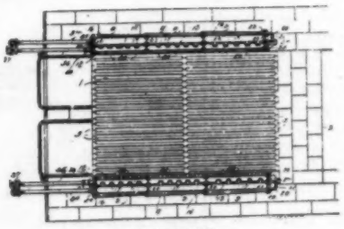
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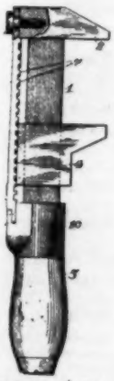
735,955.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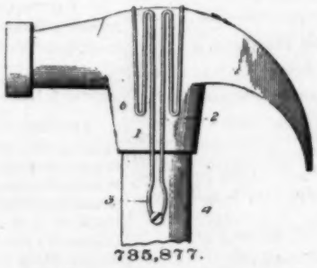
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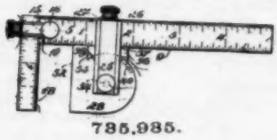
736,042.

736,283.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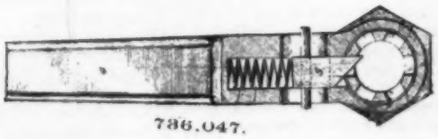
736,047.

735,751.—Gas heater. Julius C. Goodwin, Philadelphia, Pa.

736,203.—Heater. George W. Brunner, San Francisco, Cal.

735,763.—Gas furnace. Paul S. Harvey, Chicago, Ill.

736,099.—Heating apparatus. David M. Horton, Fishkill, N. Y.

735,955.—Stove pipe. Henry Ditchburn, Gravenhurst, Canada.

735,849.—Boiler or other furnace. George C. Way, Cincinnati, O.

735,846.—Flue scraper. Philip F. Vogt, Dayton, O.

736,222.—Furnace door. Jeremiah S. Cooper, Pittsburgh, Pa.

735,825.—Rasp. John H. Rohert, Oxford, Ia.

736,143.—Wrench. Daniel E. Painter, Elders Ridge, Pa.

735,877.—Nail-holding device. George Horton, Austin, Pa.

735,935.—Combination measuring tool. Charles E. Billings, Hartford, Conn.

735,845.—Hand tool. Abraham Vanderbeek, Hartford, Conn.

736,042.—Combination tool. Cornelius E. Waters, Muskegon, Mich.

736,283.—Soldering iron. Robert E. Manley, Media, Pa.

736,047.—Ratchet wrench. David L. Winters, Chicago, Ill.

A VALUABLE BOOK.

J. C. Baggs, Marshalltown, Ia., writes: "Your valuable book, 'The Manual of Business,' received some time since. After looking it through I find it indeed a valuable book. Am well pleased with it. THE AMERICAN ARTISAN is always a welcome visitor."

FREE.

"James, my son, take this letter to the postoffice and pay the postage on it."

The boy James returned after an absence of some few minutes, highly elated, and said:

"Father, I seed a lot of men putting letters in a little place, and when no one was looking I slipped in yours for nothing."—Ram's Horn.

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Magee Furnace Co 13
March-Brownback Stove Co 15
Meyer Bros. & Co., F 15
Monroe Foundry & Furnace Co 19
Mueller, L. J. Furnace Co 12
Pittsburgh Stove & Range Co 6
Richardson & Boynton 14
Robinson Furnace Co 15
Schwab, R. J. & Sons Co 20
Smith, Chas. Co 17
Stanton Heater Co 12
Tubular Heating & Ventilating Co 12
Western Furnace & Foundry Co 16

Galvanized Ware.
Briscoe Mfg. Co 59

Gas and Gasoline Engines.
Weber Gas and Gasoline Engine Co 50

Gun Cleaners.
Bridgeport Gun & Implement Co. 2

Hardware Specialties.
Acorn Brass Mfg. Co 60
Atkins, E. C. & Co 68
Atlas Mfg. Co 68
Atlas Bolt & Screw Co 1
Avery Stamping Co., The 61
Berger Bros. Co 53
Blacklock Foundry Co 64
Bischoff, Fred. F. & Co 60
Bridgeport Chain Co 60
Briscoe Mfg. Co 59
Clark Novelty Co 58
Cooley & Randegger Mfg. Co 64
Davison Mfg. Co 62
Disston, Henry & Son 65
Ehle, F. G. O. Co 57
Enterprise Mfg. Co. of Pa 67
Fox Cutlery Co 49
Ham, C. T. Mfg. Co 59
Hoehn, Fred 56
Hopkins & Allen Arms Co 48

Hardware Specialties—Con.

Hughes, C. W. 48
Hurwood Mfg. Co. 65
Kohler, F. E. & Co 59
Lalance & Grosjean Mfg. Co. 57
Lee-Glass-Andreesen Hdw. Co. 67
Lufkin Rule Co. 65
Mayer & Co. 2
Meyers, The Fred J., Mfg. Co. 56
Morrill, Chas 56
Nat. Enameling & Stamping Co. 56
Norris & Loring Hdw. Co. 48
North Bros. Mfg. Co. 61
Peck, C. A. Hdw. Co. 65
Plume & Atwood Mfg. Co. 55
Reissmann, F. 65
Richards Mfg. Co. 60
Sitterly Novelty Works 61
Smith & Hemenway Co 61
Sperry, D. R. Co. 2
Stanley Rule & Level Co. 65
Stuber & Kuck 49
Taylor & Boggis Foundry Co 64
Tower Mfg. Co. 59
Union Brick Bond Co. 58
Weiss, H. & Co 53

Heaters—Hot Water and Steam.

American Radiator Co. 2
Boynton Furnace Co 13
Detroit Heating and Lighting Co. .. 12
Kewanee Boiler Co. 2
Monroe Foundry & Furnace Co. .. 19
Smith, Chas. Co. 17
Stanton Heater Co. 12
Stolz, Frank D 7

Hoists—Electric.

Pawling & Harnischfeger 49

House Furnishing Goods

Briscoe Mfg. Co. 59
Ehle, F. G. O. Co. 57
Enterprise Mfg. Co. of Pa. 67
Lalance & Grosjean Mfg. Co 57
Meyers, The Fred J., Mfg. Co. 56
Nat. Enameling & Stamping Co. .. 67
Sperry, D. R. & Co. 2
Stuber & Kuck 49

Iron Handles—Sad.

Hoehn, Fred 56

Knives.

Smith & Hemenway Co. 61

Lamps—Miners.

Anton George 62

Lanterns.

Ham, C. T. Mfg. Co. 59

Lawn Sprinklers.

Smith & Hemenway Co. 61

Lighting Devices.

Acorn Brass Mfg. Co 60
Brilliant Gas Lamp Co. 60
Niagara Falls Acetylene Gas Generator Co. 60

Mail Boxes.

Canton Steel Roofing Co 20
Peck, C. H. Hdw. Co. 65

Metal Polish.

Hoffman, Geo. W 51
Stevens, F. B. 51

Metals—Perforated.

Aitchison, The Robert Perf'd Metal Co. 54
Stimpson, Edwin B. & Son. 54

Miniature Tools.

Davison Mfg. Co. 62

Oven Thermometers.

Evans Stamping & Plating Co. 51
Helios-Upton Co. 51

Paints.

Buckeye Paint & Varnish Co. 55
Connors, Wm. Paint Mfg. Co 1
Dixon, Jos. Crucible Co. 48
Forest City Paint & Varnish Co. .. 53

Patents.

Peck, Hubert S. 47
Willson & Co., H. B. 1

Pattern Letters.

St. Louis Electrotyping & Fdy. Co. 53

Pencils.

Dixon, Jos. Crucible Co. 48

Punch—Hand.

Morrill, Chas 56
Weiss, H. & Co 53

Radiators—Hot Water and Steam.

American Radiator Co. 2
Smith & Hemenway Co 61

Radiators—Stove Pipe.

Burton, The W. J. Co 7
Independent Register Co. 7
Reddy, James M. 7
Rochester Radiator Co. 7
Wilmot Castle Co 7

Registers.

Auer Register Co. 21
Canton Steel Roofing Co. 20
Ferrosteel Co. 20
Hart & Cooley Co., The 19
Henry & Scheible Co 20
Mueller, L. J. Furnace Co. 21
Norris & Loring Hdw Co. 48
Schwab, R. J. & Sons Co. 20
Symonds Mfg. Co 21
Tuttle & Bailey Mfg. Co. 21
Walworth Run Foundry Co. 17

Roofing.

American Steel Roofing Co. 53
Berger Mfg. Co 55
Canton Steel Roofing Co. 20
Clark, Quien & Morse 63
Cortright Metal Roofing Co. 2
Eller, J. H. & Co. 54
Follansbee Bros. Co. 52
Garry Iron & Steel Co. 52
LaCrosse Steel Roofing & Corrugating Co 53
Milwaukee Corrugating Co. 53
Osborn, The J. M. & L. A. Co. 54
Perkins, J. L. & Co. 1
Sykes Steel Roofing Co 54

Sandpaper Handles.

Reissmann, F. 65

Sash Balance.

Pullman Mfg. Co. 68

Saws.

Atkins, E. C. & Co. 68
Disston, Henry & Sons 65

Saw Sets.

Disston, Henry & Sons 65
Smith & Hemenway Co 61
Morrill, Chas 56

Scales.

American Cutlery Co. 58
Osgood Scale Co. 1
Triner Scale & Mfg. Co 58

Screw Drivers.

Hurwood Mfg. Co. 65
North Bros. Mfg. Co. 61

Shovels.

Avery Stamping Co., The 61
Kohler, F. E. & Co. 59

Skylights.

Galesburg Cornice Works 54
Jones, J. H. & Son 2

Skylight Gearing.

Weiss, H. & Co. 53

Slaters' Tools.

Isele, A. W. & Son 48

Sporting Goods.

Bridgeport Gun & Implement Co. 2
Hopkins & Allen Arms Co 48
Peters Cartridge Co 2
Stevens, J. Arms & Tool Co 62

Steel—Sheet.

Sayre Stamping Co. 50

Stove Bolts.

Atlas Bolt & Screw Co. 1
Columbus Bolt Works 1

Stove Lining.

Connors, Wm. Paint Mfg. Co. 1
Bridgeport Crucible Co. 50
Williams Stove Lining Co. 49

Stove Patterns.

Cope, Geo. W. Pattern Works 50
Gobeille Pattern Works 50
Mersfelder Pattern Works 50
Milwaukee Pattern Works 50
Weller Pattern Co. 50

Stove Polish.

Black Silk Stove Polish Works .. 51
Dixon, Jos. Crucible Co. 48
Nickel Plate Stove Polish Co. 1

Stove Putty.

Connors, Wm. Paint Mfg. Co. 1

Stove Repairs.

Brauer, A. G. 50
Brucker, M 49
Dust, Wm. T. Co. 50

Stoves and Ranges.

Beckwith, Estate of P. D. 22
Brand Stove Co. 8
Clark, Geo. M. & Co 10
Hess-Snyder Co., The 9
Joliet Stove Works 3
Lindemann, J. P. & Sons 4-5
March-Brownback Stove Co. 15
Miller, Wm., Range & Furnace Co. 9
Peerless Steel Range Co 11
Pittsburgh Stove & Range Co. 6
Royal Stove and Range Co. 6
Smith & Anthony Co. 8
Sterling Foundry Co. 19
Travilla, M 8
Van Range Co., John 11
Willard, Wm. G. 8

Stove Supplies.

Chicago Furnace Supply Co 9
Sayer Stamping Co. 50

Stove Trimmings.

Atlas Bolt & Screw Co. 1
Columbus Bolt Wks 1
Evans Stamping & Plating Co. 1
Helios-Upton Co. 51
Howes, S. M. Co., The 50
Sayre Stamping Co. 50
Taylor & Boggis Fdy. Co. 64

Tacks.

Tower Mfg. Co. 59

Tape Measures.

Lufkin Rule Co. 65

Tents and Awnings.

American Tent & Awning Co 65

Tinners' Tools and Supplies.

Berger Bros. Co. 53
Burgess Soldering & Fur. Co. 52
Clayton & Lambert Mfg. Co. 52
Dries: Andrews & Krump 52
Lufkin Rule Co. 65
Perkins, J. L. & Co. 1
Sayre Stamping Co. 50
Smith & Hemenway Co 61
Stanley Rule & Level Co. 65
Weiss H. & Co. 53
Young Mfg. Co., The 53

Tinplate.

American Tinplate Co. 52
Garry Iron & Steel Co. 52
Illinois Roofing & Supply Co. 68
McClure & Co. 68
Osborn, The J. M. & L. A. Co. 54

Tinware.

Cooney & Geiger 68
Ehle, F. G. O. Co. 57
Nat. Enameling & Stamping Co. .. 55
Stuber & Kuck 49

Torches.

Clayton & Lambert Mfg. Co. 52

Tools.

Geneva Tool Co. 1
Hurwood Mfg. Co. 65

Ventilators.

Globe Ventilator Co. 68
Powers Bros. 1

Wagons—Hardware.

Shipman-Bradt & Co. 60

Washers.

Columbus Bolt Works 1

Washing Machines.

Benbow-Brammer Mfg. Co. 63
Boss Washing Machine Co. 63
Brammer, H. F. Mfg. Co. 63
Gagan, J. M., & Co 58
Nineteen Hundred Washer Co. 62
Nineteen Hundred and Three Washer Co. 63
Voss Bros. Mfg. Co. 62
White Lily Washer Co. 62

Water Supplies.

Horigan Supply Co. 5

Weaner—Colt, Calf, Cow.

Cooley, Randegger Mfg. Co. 64

Wrenches.

Hurwood Mfg. Co. 65

TOUCHWOOD AND DRIFT.

Is it not true that an entomologist's home is bug-house?

For knocking down cash the paying machine holds the record.

There is microscopic suspicion that some "butterfly" girls emerge from the cocoon prematurely.

The centenarian ought to be old enough to know what he is living for.

The genus homo bluffem is said to subsist on thermal air.

The diary of a matchmaker ought to be a luminous volume.

The rapacity of the swindler is to the purse as the square of the victim is to his credulity.

Even the prettiest knocker would find in his heart a potent objection to the abolition of pay day.

Why doesn't some unappreciated and undiscovered genius write "The Love Letters of a Saint" for posthumous fame?

Not all the literary crop turns golden; much of it lacks the sun of the advertiser's favor.—Ex.

Trade Report.

CHICAGO IRON MARKET.

The pig iron market seems to have waked up a bit since the cut was made by the Southern association.

There is general purchasing, also buyers are taking large lots. Where small lots were being made large purchases are being freely made.

The last cut was considered as low as prices would probably go, but there is now prospects of further decline. This rumor cannot be confirmed, as local agencies have not been notified of any further cut.

Several furnaces have gone out of operation on account of their inability to meet present market conditions, and it is supposed others will be obliged to follow.

Foundry coke prices are unchanged, with a feeling that a further reduction may not be expected. Buyers show more interest in making long-time contracts.

BILLETS.

Reports from the mills on billets is encouraging. Three thousand tons of Bessemer billets are reported sold, also 1,000 ton lot and several carloads. A deal for 1,000 tons of wire rods for delivery at Cleveland was also closed on the basis of $36 Pittsburgh. Our quotations are without change at $28 for Bessemer, $29 for open-hearth and $32 for forging, carload lots.

PLATES.

Lack of shipping facilities, the demand on plates has not been of heavy volume the week past. Store trade is active. We quote mill prices, Chicago delivery: Tank steel, ¼-inch and heavier, 1.75c; flange steel, 1.85c. Prices for lots from stock, tank steel, ¼-inch and heavier, 2c to 2.10c; 3-16, 2.10c to 2.15c; No. 8, 2.15c to 2.20c; No. 10, 2.30c to 2.35c; flange steel, 2.40c to 2.50c.

BARS.

The demand on bars has assumed an active attitude, the prospective orders going to five figures. The demand seems to be growing from week to week, and with the announcement of the letting of the International Harvester Co.'s order, it is expected there will be more brisk buying. Consuming interests representing about 200,000 tons have not yet covered for their requirements, having withheld their orders in the hope of a cut in prices. None being forthcoming, a buying movement is expected to start in earnest this month. Bar iron shows no change either in strength or demand. Orders for small lots for quick shipment preponderate, few buyers contracting for deliveries longer than thirty to sixty days ahead. We quote mill shipments, Chicago delivery: Iron, 1.55c to 1.60c; Bessemer steel, 1.76½c; angles, less than 3x3, 1.86½c base; hoops, in lots of 250 tons and greater, 2.06½c; less than this amount, 2.16½c. Quotations from store, less than carload lots: Steel, 2c; iron, 2c to 2.10c; hoops, 2.30c to 2.40c; angles, 2.10c rates.

MERCHANT STEEL.

The requirements of the season are constantly being placed with the mills by implement makers. Specifications are of good volume and the outlook for business is satisfactory. We quote mill shipments, Chicago delivery, as follows: Spring steel, 2.65c to 2.75c; sleigh shoe, 1.95c, flat sizes; concave and convex, 2.25c; cutter shoe, 2.50c to 2.60c; machinery steel, 2.15c to 2.25c base; plow steel, 2.50c and upward, according to quality; toe calk, 2.35c to 2.45c; out of stock, 3c to 3.10c; ordinary tool steel, 6c to 7c; special, 13c and upward; less than carload lots, 5 and 10 per cent higher; cold-rolled shafting, carload lots, 47 per cent off; less than carload lots, 42 per cent off.

WIRE NAILS.

The market on wire nails has experienced the placing of some liberal orders of general assortment by the jobbers. The present is satisfactory and the future outlook is encouraging, the market remaining firm, with the prospect that no change in prices will be made in the near future. Sales continue to be made at $2.15 to $2.20 for carload lots, f. o. b. Chicago. Broken cars sell at 5 to 10 cents higher. For galvanizing 75 cents per keg and for tinning $1.50 extra per keg is charged.

CUT NAILS.

Cut nails have had an increase in movement, the market livening up some during the week. The mills continue to ship promptly on all business received, sales being made on the basis of $2.30 in carload lots and $2.35 for less than carload lots for steel, Chicago. Iron nails are held at $2.45 to $2.50 per keg from store.

BARB WIRE.

September delivery on barb wire is on the increase and manufacturers report business better in general. There was a larger tonnage distributed during August this year than in 1902. In fact, the prospect is so encouraging that some mills have been placed on double turn. The tone of the market is firm, without change in prices. Galvanized wire is selling on the basis of $2.75 and painted at $2.45. For small lots 5 to 10 cents extra is charged. Staples in carload lots sell as follows: Polished, $2.30, and galvanized, $2.70.

SMOOTH FENCE WIRE.

Further improvement is noted in the demand for both smooth wire and fencing and manufactured articles, while the outlook is much improved for the future. The market remains firm in tone without change in prices, which are as follows: Nos. 6 to 9, $2.05, and $2.15 in less than carload lots from store; galvanized, 30 cents extra for Nos. 6 to 14 and 60 cents extra for Nos. 15 and 16.

CORDAGE.

Manufacturers report an increased demand on Manila and Sisal rope, especially mixed grades of Sisal. Quotations, on the basis of 7-16 inch diameter and larger, are as follows: Mixed Sisal, 8¼ to 8½ cents per pound; pure Sisal, 9¼ to 9½ cents per pound; Manila, 11½ to 11¾ cents per pound.

TOOL CHESTS.

The American Tool Chest Company, 200 West Houston street, New York, in their illustrated catalogue recently issued of tool chests for all classes of persons, from child to mechanic, including chests only, or fully equipped with tools from the inexpensive to high grade, fully warranted, quote a discount of 50 per cent for dealers, with a concession from this for wholesalers and jobbers. These goods are especially adaptable to the fall and holiday trade.

AXLES.

The manufacturers of wagon and carriage axles are announcing somewhat advanced prices as the result of an agreement which has been reached by the principal producers. It is understood that the arrangement which exists between them is a strong one and that the prices determined upon will be maintained.

BUCKETS.

Buckets are quoted as follows: Well: wooden, top ear, plain, are $3.50 per dozen; wooden, ton ear, swivel, are $4.60 per dozen; wooden, side strap, plain. are $3.60 per dozen; wooden, side strap, swivel, are $4.75 per dozen.

HANDLES.

Handles are quoted as follows: Hay and manure fork are 40 and 10 per cent off; shovel and spade are 40 per cent off.

ROPE.

Sisal rope is quoted at 8½c.

AMMUNITION.

Drop shot, smaller than "B," 25-pound bags, is $1.50 per bag; drop shot, "B" and larger, 25-pound bags, is $1.75 per bag; buckshot, 25-pound bags, is $1.75 per bag; chilled shot, 25-pound bags, is $1.75 per bag.

AWLS.

Awls are quoted as follows: Brad, handled, 28c per dozen; shoulders, assorted 1 to 4, 95c per gross; patent assorted 1 to 4, 90c per gross; harness, common, are $1.10 per gross; patent are 90c per gross; peg, shouldered, are 95c per gross; patent are 40c per gross; scratch, No. 2, handled, are $4.40 per gross; No. 1 socket, handled, are $1.15 per dozen; No. 20 Hurwood are $2.00 per dozen; sewing, common, are 90c per gross; sewing, patent, are 90c per gross.

FRAMES.

Hack saw crown frames are $6.25 per dozen.

RAIL.

Safety foot rail is 4½c per foot.

BOLTS.

Carriage bolts, ⅜ inches, in all sizes and smaller, are quoted at 70 and 5 per cent off; 7-16 inches and larger at 70 per cent off.

CUTTERS.

Slaw and kraut cutters, 1-knife slaw, are $1.50 per dozen; 2-knife slaw are $2.10 per dozen.

WEIGHTS.

Hitching weights are 2½c per pound.

TIN.

The market for tin is lower at 26.70@26.75c for spot and 26½@26¾c for futures. The jobbing price is steady at 28¾@29½c.

TIN PLATES.

Tin plates are steady, jobbing quotations remaining unchanged at: Melyn, $6.50@7; Alloway, $5.75@6.25; coke, $4.87½@6.50; ternes, $5.25@8; additional X, $1.50@1.75 more.

SPELTER.

Spelter is steady at: Round lots, New York, 6c for spot and 5¾@5⅞c futures; jobbing, 6⅛@6½c; sheet zinc, cask lots, 7½@8½c; small lots, 8@9c; St. Louis market is quoted quiet at 5.60@5.75c.

ANTIMONY.

Antimony is easy and pressed for sale: Cookson's, 7@7¼c; Hallett's, 6⅜c; United States and other brands, 6c. The above prices are for round lots.

NICKEL.

Nickel is steady at 40@47c for large lots. Small lots are quoted at 60c.

Prices of nickel anodes are as follows: 80 to 82 per cent nickel, 45@50c per lb; 82 to 84 per cent, 52@57c; 95 to 97 per cent, 54@59c. The lower price, in each case, is for lots of 500 lbs or over; the highest price for lots of 100 lbs or less.

PLATINUM.

Platinum is firm, with a good demand: New York, $19 per oz for large lots.

QUICKSILVER.

Quicksilver is firm and unchanged: New York, $47.50 per flask for large lots; small orders, more; San Francisco, steady at $44.50@46, domestic orders; export, $42@43.

ALUMINUM.

Aluminum is quiet and unchanged: No. 1 ingot, 33@37c per lb; No. 2, 31@34c; rolled sheets, 4c and up.

Current Hardware and Metal Prices.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly.

METALS.

FIRST QUALITY BRIGHT PLATES.

		Per Box.
IC	14x14	$10 25
IC	14x20	7 85
IX	14x20	9 10
IXX	14x20	10 35
IXXX	14x20	11 60
IXXXX	14x20	12 85
IC	20x28	15 45
IX	20x28	17 95
IXX	20x28	20 45

COKE PLATES.

Cokes, 180 lbs	IC	20x28	9 15
Cokes, 200 lbs	IC	20x28	9 35
Cokes, 216 lbs	IC	20x28	9 65
Cokes, 216 lbs	IX	20x28	11 75

PIG IRON.

Lake Sup. Charcoal	$20 50@$21 50
Local Coke Fdy No. 1	17 50@ 18 00
Local Coke Fdy No. 2	17 00@ 18 00
Local Coke Fdy No. 3	16 50@ 17 00
Local Scotch Fdy No. 1	17 50@ 18 00
Ohio Strong Softeners, No. 1	21 00@ 22 00
Southern Silvery	18 35@ 18 85
Southern Coke No. 1	16 60@ 16 85
Southern Coke No. 2	16 10@ 16 35
Southern Coke No. 3	15 65@ 15 85
Southern Coke No. 4	15 10@ 15 35
Southern No. 1 Soft	16 60@ 16 85
Southern No. 2 Soft	16 10@ 16 35
Alabama Car Wheel	25 35@ 26 85
Malleable Bessemer	17 50@ 18 00
Jackson Co Silvery	21 30@ 22 30

BLACK SHEET STEEL.

No. 16 per 100 lbs.	$2 65
No. 18-20 per 100 lbs.	2 75
No. 22 24 per 100 lbs.	2 85
No. 25-26 per 100 lbs.	2 95
No. 27 per 100 lbs.	3 05
No. 28 per 100 lbs.	3 15
No. 29 per 100 lbs.	3 30

SMOOTH STEEL.

Wood's Smooth No. 15-17	2 85
" " No. 18	2 95
" " No. 20	3 05
" " No. 22-24	3 15
" " No. 25-26	3 25
" " No. 27	3 35
" " No. 28	3 45

PATENT PLANISHED SHEET STEEL.

Patent Planished Sheet Steel.
"A" $10 20, "B" $9 20

GALVANIZED IRON

P.O.B. Chicago ..... 75&2½%

HOOP IRON.

¾x22	¾x20	⅞x20
$3 20 100lbs.	$3 10 100lbs.	$3 00 100lbs.
1x20	1¼x19	1½x19
$3 90 100lbs.	$3 85 100lbs.	$3 75 100lbs.

PAINTED CORRUGATED IRON.

8 x 3½ feet Sheets, 28 gage, per 100 lbs. $2 45

SOLDER.

XXX Guaranteed ½&½ per lb. 20¼c
Commercial ½&½ ..... per lb. 20¼c
No. 1 Plumbers 17¾c

SHEET ZINC.

600 lb. Casks ..... base, per cwt. $6.90
300 lb. Casks ..... per cwt. 7.10
Sheets ..... per cwt. 7.15

COPPER.

Copper ..... base, 24c

TIN PIGS AND BARS.

Banca, pigs, per lb ..... 35@35½c
Straits pigs, per lb 35c
Straits in bars, per lb 37c

LEAD.

American Pig ..... $4 60@4 62½c
Bar 6¼
National (White) brands (in less than 100 lb. lots) per lb 7½

HARDWARE.

ADZES.

Carpenters'.
Ajax 50%
Blood's ..... 40&5%
Hunt's 25%
White's 12½%
Coopers'.
Barton's 20%
White's 15%
Ship.
Ajax 50%
Blood's ..... 40&5%
Hunt's 25%
White's 12½%

AMMUNITION.

Caps, Percussion—per 1,000.
F L Waterproof, 1-10s 40c
G D 35c
Eley's 52c
Cartridges.
Peters Rim Fire Ctgs ..... 50&3%
Peters Cent Fire, Pistol & Rifle 25&3%
Peters Cent Fire, Military and Sporting Ctgs ..... 15&3%
Peters Blank Ctgs, except 22 and 32, an additional 10% from above discount.
Peters Blank Ctgs. 22 cal. $1 18
Peters Blank Ctgs. 32 cal., C. F. .. 4 40
Peters B B Caps, Round ball $1 44
Peters B B Caps, Conical ball ... $1 85
U. M. C. Rim Fire Ctgs ..... 50&3%
U. M. C. Cent. Fire, Pistol & Rifle 25&3%
Winchester Cent. Fire, Military and Sporting Ctgs ..... 15&3%
U. M. C. B B Caps, Round Ball ..... $1 75..18%
U. M. C. B B Caps, Con. Ball. $1 85 net
U. M. C. Rim Fire Shot Ctgs. 50&15&3%
U. M. C. Cent. " " 25&15&3%
Primers.
Berdan Primers $1 00
Peters Primers 1 20
U. M. C. Primers 1 20
Winchester Primers 1 20
Shells.
Peters Empty Paper Shells, 10 and 12 gauge. League ..... 25&2%
Peters Empty Paper Shells, 16 gauge. League ..... 20&2%
Peters New Victor Nitro Shls .. 20&2%
Ideal ..... 25&7%
Peters Loaded Shells. League and Referee Semi-Smokeless. 40&1%
Peters New Victor Loaded Shells with King's Smokeless ..... 40&6%
Ideals Loaded with King's Smokeless ..... 40&10&10&1%
U. M. C. New Club, 16 gauge .... 20&2%
U. M. C. New Club ..... 25&2%
U. M. C. Nitro ..... 20&2%
U. M. C. High Base ..... 20&2%
Winchester Blue Rivals ..... 40&1%
Winchester Yellow Rivals ..... 40&1%
Winchester Repeater ..... 20&2%
Winchester Leader ..... 40&6%
U. M. C. Loaded Shells, Black Powder ..... 40&1% full cases
Winchester Loaded Shells, Black Powder ..... 40&1% full cases
U. M. C. ..... Smokeless 40&10&10&1% full cases
Winchester ..... Smokeless 40&10&10&1% full cases
Gun Wads—per 1,000.
Peters Gun Wads 18%
U. M. C. Gun Wads 18%
Powder. Each
King's Smokeless, kegs $11 30
" " ½ kegs 5 80
" " ¼ kegs 2 97
" " 1-lb. cans 51
" " 1-lb. " rifle 70
Dupont's " 50-lb. drum .. $22 45
" " 25-lb. kegs .. 11 30
" " 12½-lb. kegs. 5 80
" " 6¼-lb. kegs .. 2 97
" " 1-lb. cans 51
Shot.
Dropshot, sizes smaller than B, 25-lb. bags, per bag $1 50
Drop shot, B and larger sizes, 25-lb. bags, per bag 1 75
Buck Shot, 25-lb. bags, per bag .. 1 75
Chilled Shot, 25-lb. bags, per bag. 1 75

ANVILS.

Trenton, 70 to 80 lbs ..... 9¾c per lb
Trenton, 81 to 150 lbs ..... 9c per lb

AUGERS.

Boring Machine ..... 60&10&5%
Carpenters' Nut ..... 60&10&5%
Hollow: Ives' New Pattern 25%
Bonney's—list $30.00 ..... 65&10%
Stearn's, No. 1 ..... doz. $42 00
Stearn's, No. 3 ..... " 33 50
Post Hole.
Dalbey, 8-inch ..... per doz. $ 5 75
Digwell, 8-inch ..... " 13 00
Howe's, 6 and 8-inch .. " 12 50
Iwan's Improved ..... 40 & 5%
Vaughan's, 6 to 9-inch per doz. 6 75
Rafting.
Snell's ..... 50&5%
Ship.
Ford's, with or without screw, 40-5%
Snell's, " " " 40-5%

AWLS.

Brad, handled ..... per doz. $0 28
shouldered, ass'd, 1 to 4 ..... per gr. 95
patent, asst'd, 1 to 4 " 90
Harness, common ..... " 1 10
patent ..... " 90
Peg, shouldered ..... " 95
patent ..... " 40
Scratch, No. 2, handled ... " 4 40
No. 1, socket handled ..... per doz. 1 15
No. 20 Hurwood " 2 00
Sewing, common ..... per gr. 90
patent ..... " 90

AXES.

Boys', Handled:
Camp Fire, 3-lb., per doz $5 75
" " 4-lb., freighters', per doz 6 75
Cast Steel, good grade, pr. dz., 5 50
Pioneer, per doz 6 75
Broad:
Peerless 50%
Red Warrior, per doz $18 50
Firemen's, per doz 15 50
Single Bitted (without handles)
Gladstone, per doz $6 75
Hubbard's " " 6 50
Hunt's " " 6 25
Lippincott's " " 6 25
Mann's " " 6 50
Pioneer " " 6 50
U. S. A. " " 7 75
Valley Forge " " 6 00
Second Quality " " 5 75
Double Bitted (without handles):
Lippincott's ..... per doz $8 50
Mann's ..... " " 8 50
Pioneer ..... " " 9 25
U. S. A. ..... " " 11 00
Valley Forge ..... " " 8 25
Ship, Blood's ..... " " 18 50

BALANCES, SPRING.

Frary's 50%
Pelouze 20%

BAGS, PAPER NAIL.

Pounds .. 3 5 10 16 20 25
Per 1,000. $1 60 1 85 2 60 3 40 3 90 4 75

BARS, CROW.

Pinch or Wedge Point ..... cwt. $3 40

BEAMS—SCALE.

P. S. & W Co 40%

BEATERS.

Carpet, Rattan ..... per doz $2 40
Raymond's Steel Wire, " " 80
Woven Wire, No. 4 .. " " 1 10
Egg.
Dover Pattern ..... per doz. $0 70
Genuine Dover ..... " 0 90
Mammoth Dover ..... " 1 75
Lightning ..... " 0 84
Lyon's (standard size) " 1 75
Whip, French ..... " 1 35
Spiral ..... " 0 40
Spoon ..... " 0 40
Surprise ..... per gro. 1 45

BELLOWS.

Blacksmiths' ..... 70&5%
Hand, 8 in ..... per doz. $ 6 85
10 in ..... " 8 40
Molders', 12 in ..... per doz. 13 00

BELLS.

Call.
2¾ in. nickeled bell . per doz. $ 1 35
2¾ in. " brass bell " 3 60
3 in. " " " " " 7 50
3 in. " silver alloy bell, ... per doz. 16 50
4½ in. " brass bell and base ..... per doz. 14 50
Cow.
Ordinary Goods ..... 70&5%
High Grade ..... 60&10%
Jersey ..... 70&10%
Door.
Bigelow Automatic .. per doz. $9 50
Rotary.
3 in. bronzed iron bell " 5 25
3 in. nickeled " " " 7 50
3½ in. " " " " 9 00
Hand.
Hand Bells, Polished .... 60@60&10%
White Metal 50%
Nickel Plated 40%
Swiss ..... 60&5%
Silver Chime 33⅓%
Miscellaneous.
Church and School, Steel Alloy, ... 50, 10 & 5%
Farm, lbs .. 40 50 75 100
Each. $1 10 $1 30 $1 85 $2 65
Miscellaneous Cont.
Strapped Sheep ..... per doz. $1 90
House Gong ..... 40&5%
Sleigh, Round, Loose ..... 40&5%

BELTING

Leather—List dated Nov. 12, 1901.
Standard 75%
Eclipse ..... 60&10%
Extra Grade ..... 50&10%
Rubber—
Standard ..... 75&5%
Amherst ..... 65&10%
Extra ..... 60&2½%

BEVELS—TEE.

Stanley's, rosewood handle, new list ..... 40&5%
Stanley' ron handle ..... 40&5%

BINDING—OIL CLOTH.

Zinc ..... 75, & 10%
Brass 75%
Brass Plated ..... 75 & 10%

BITS.

Auger.
Extra Double Spur ..... 70&5%
Ford's Car and Machine .... 40&10%
Ford Improved ..... 40&10%
Ford's Ship ..... 40&10%
Irwin ..... 30&10%
New Jenning's 50%
Russell Jenning's ..... 25&7½%
Clark's Expansive ..... 50, 10&5%
Steer's " Small ..... new list $22.0
Irwin Car ..... 30&10%
Snell's Car ..... 60&5%
" Ship ..... 40&5%
" " Auger Pattern Car .. 40&5%
Center ..... 40&10%
Countersink—
Wheeler's ..... per doz. $1 60
American Snail Head " 0 70
" Rose " " 0 80
" Flat ..... " 0 70
Buck Bros'. Flat ..... " 2 60
German ..... " 0 70
Dowel, New Jennings ..... 40&10%
Gimlet—
Standard Double Cut 50&5@50&10%
German Pattern ..... per doz. $0 48
Gouge ..... " 0 80
Spoon ..... " 0 80
Countersink ..... " 1 20
Reamer—
Buck Bros.' ½ Round. " 2 75
" " Square .. " 2 50
Standard ½ Round ... " 0 75
" Square ..... " 0 75
German Octagon ..... " 0 75
Screw Driver—
Round Shank ..... " 0 48
" " extra quality " 1 40
Square Shank ..... " 1 10

BLACKING—STOVE (See Polish.)

BLADES—SAW.

Butchers'—
Standard ¾ & 1¼in ..... 60&5%
Clock Spring ..... 60&5%
Star 20%
Hack—
Disston's ..... 25&5%
Griffin's ..... 35&5%
Star 20%
Wood—
Jackson's ..... per doz. $2 25
Disston's—No. 6, 16, 26 & 045, $4 20; No. 11, $6.30.
W. M. & Co.'s No. 20 .. per doz. $5 50
Snatch— BLOCKS.
Wooden ..... 50&10%
Steel ..... 40&10%
Tackle—
Wooden ..... 70&5%
Steel ..... 50, 10&5%

BOARDS.

Stove 40%
Wash—
Anchor ..... per doz. $1 60
Globe ..... " 2 10
Banner ..... " 2 60
Crystal ..... " 3 15
Brass King ..... " 3 15
Nickel Plate ..... " 3 15
Enamel King ..... " 3 15

BOBS—PLUMB.

Carpenters', 5½ oz. Iron .. pr dz. $0 65
1½ lb. " " " 1 60
2¾ lb. " " " 1 80
13 oz. lead .... " 3 00
6½ oz. brass. " 3 30
Mason's, 3 lb. lead ..... " 4 00

BOILERS—FARM.

Profit ..... 30&5%
Solon ..... 35&5%

BOLTS.

Carriage, Machine, Etc.
Carriage. ⅜x6¼ and sizes smaller and shorter ..... 70&5%
Carriage. ⅜x4½ and sizes larger and longer 70%
Machine 70%
Elevator ..... 50-10&5%
Plow ..... 45&5%
Stove 50-5%
Tire ..... 72½&5%
Wagon Box Strap ..... 70&10%
Mortise Door—
Gem ..... 50-10&5%
Ives' ..... 50&10%
Barrel—
Cast 50%
Wrought ..... 50&5%
" Bronzed ..... 75&5%
Flush, Wrought, B. K ..... 40&5%
Spring—
Wrought ..... 75&10%
" Brass ..... 75&10%
Square—
Cast 40%
Wrought ..... 60-10&10%

BORERS.

Angular, Miller's Falls, per doz $12 75
Bung, Common Ring with Handle—
Inches 1½ 1¾ 2
Per doz $6 00 6 90 8 10

BORERS—CONTINUED.
Enterprise Mfg. Co., No. 1 List $1.50; No. 2, $2.00 each....25-10&5%

BOXES.
Mail, No.......... 5 10 20
Per doz........$3 65 10 50 13 00
Mitre—
New Langdon..............15&5%
Olmsted's 15%
Stanley's......................30%
Seavey's ....per doz 8 00
Twine, Nos... 20 30 25 121
Per doz $1 50

BRACES.
Common Ball..............$1 35@1 45
Barbers' Pattern ....60&10%
Fray's Gen. Spofford's.........50&10%
" No. 66 to 146.......50&10&7½%
P. S. & W. Co.'s Peck's Adjustable......................50-10&5%

BRACKETS.
Hay-Rack, Wenzelmann's No. 1, $12.60; No. 2, $13.20 per doz.
Shelf—
Cast Iron, Plain ....50&10%
Stanley's Wrought Steel.......
.......................70-10&2½%
Wire...........................75-10&5%

BROILERS.
Wire ....70&10%
Crown, Self-Basting, No.80..doz. $2 90

BUCKETS.
Pump Rubber—
Wychoff..................per gr. $4 75
Cooper................ " 5 50
Champion .... " 7 50
Victor .... " 9 50
Star.................. " 5 00
IXL................... " 6 75
Well—
Galv'd Qts...... 8 10 12
Per doz $2 50 2 85 3 15
Wooden, top ear, plain, per doz 3 50
" " swivel " 4 60
" side-strap, plain " 3 60
" " swivel " 4 75

BUCKS, SAW.
Folding ....per doz $1 75

BURS, RIVETING.
Copper Burs Only...........35-10&5%
Tinners' Iron Burs Only...........70%

BUTTS.
Cast-Iron......................65&10%
Wrought Brass....................20%
Wrought Steel Bright—
Nos. 800, 804, 808, 810, 814 and 834
.........................70-10-10&5%
Nos. 838, 840 and 842 ...70-10-10&5%
Nos. 822 and 823..... 75-25-10-10&5%
Wrought Steel, Japanned—
Nos. 731 and 727............70&10&10%

CALIPERS.
Double ....40&10%
Inside and Outside...............40&10%
Wing..............................40&5%

CALKS.
Logger's Boot,(Lufkin R. Co's.)
.......................per M $3 65
Toe.
Shoenberger............per lb. 5c
Bessemer .... " 5¼c
American .... " 7¼c
Swedes................. " 8¼c

CANS.
Cheese Factory Can Stock—
Gallons.... 15 20 30 40
Per set....$2 90 $3 15 $3 75 $4 75
Milk
New Elgin Pattern,
Nos. 105, 408, 410, 708, 710.
Gal. each, 5 8 10 8 10
per doz. $16.60,$19.85,$21.10,$22.45,$24.45
New York Pattern,
Nos. 908, 910,
Gal. each, 8 10
Per doz. $25.15, $26.95.
Oil—
1 Gal. glass, Daisy....per doz. $2 35
1 " cushioned " 3 90
Star, gals...... 1 2 3
Per doz........ $1 85 $3 00 $3 90
Per doz.
Champion Faucet, 5 gallon...$ 5 65
Sterling Tilting....5 " ... 8 25
"High C" Pump...5 " ... 9 25
Eureka Pump.....5 " ... 12 25
Wood Jacket ....50-10&5%

CAPS—GUN.
See Ammunition.

CARRIERS.
Hay—
Myers' Imperial.........each $3 40
" Clover Leaf...... " 3 40

CARTRIDGES.
See Ammunition.

CASTERS.
Acme—Ball Bearing............ ..35%
Bed............................60&10%
Common Plate—
Brass wheel...... ....60&10%
Iron and porcelain wheel...50&10%
Philadelphia Plate.............65&10%
Martin's....................40-10&5%
Payson's........................ 75%
Tucker's—Wood and iron wheel..70%
" Rubber wheel......65&10%

CATCHERS—GRASS
Lieder's No. 1..........per doz, $6 25
Eureka.................. " 4 25
Ideal No. 4................ 50

CHAIN AND CHAINS.
Breast Chains—
Doubleslack........doz. pairs $5 00
With Covert snaps " 4 75
" slide.......... " 2 90
Without slide..... " 2 60
Bright Ox Chains—
5-16in. $6 75: ⅜in. $5 75 per 100 lbs.

Bright Coil Chain—
American, new list............33⅓%
German.................. ...60-10&5
Triumph, new list..............20%
Cable Coil Chain—
Inch.......... 3-16 ¼ 5-16 ⅜
Per 100 lbs....$9 75 $7 25 $5 90 $4 75
Inch .... 7-16 ½ ⅝ ¾
Per 100 lbs....$4 60 $4 50 $4 25 $4 25
Cable Log Chain—Advance 25c per 100 lbs. on Cable Coil.
Cow Tie Chains—
American 2 toggle.......40-10 & 5%
" toggle and snap, 40-10&5%
" open and closed ring..........................40&5%
Halter Chains—
American, new list............33⅓%
German.....................60-10&5%
Niagara, new list..............40&5
Triumph, " 20%
Jack Chain—
Brass..............................60%
Iron...............................60%
Picture Chains—
Light Brass, 2 ft.......per doz. 63c
Heavy " 3 "....... " 75c
Pump Chain—Galvanized per 100 lbs.......................... $4 45
Safety Chain—Brass..........60&10%
Stretcher Chains—
5-16 in., $7.75—⅜in., $7.00 per 100 lbs.
Tie-Out Chains—Browns......70&10%
Trace Chains—Western Standard—
6½— 6-2..................per pair 26c
6½— 8-2................ " 30c
6½— 8-3................ " 29c
6½—10-2................ " 35c
7 —10-2................ " 40c
Add 2c per pair for Hooks.
" 2c " for Twist Link.
Wagon Stay Chains—
Inch ¼ 5-16 ⅜
Per 100 lbs. $6.50 $6.00 $5.25
Well Chains—
With Swivel.............per doz. 95c
Without " .... " 80c

CHALK-CARPENTERS'.
Blue...................per gross 58c
Red.................... " 48c
White.................. " 38c
Common White Sch'l Crayon............ " 5½c

CHARCOAL.
In barrels ....per bu. 21c

CHECKS-DOOR.
Blount 30%
Blum-Jap'd, $6.25; Brzd., doz... $7.00
Columbia....................50, 10&5%

CHIMNEY TOPS.
Iwan's Volcano.....................50%

CHISELS.
Box—
Inches............ 10 12 14
Round....per doz. $2.10 $2.25 $2.75
Flat......per doz. 2.85 3.60 4.20
Cold—
Good quality......per lb. 12@ 20c
U.S.A.,extra quality..per lb. 28c
Socket, Framing and Firmer—
Barton's.......................... 20%
P S. & W. Co's.................... 70%
For beveled back, add..per doz......................... 60c
Tanged, Firmer—
P. S. & W. Co's................35&5%
With Handles add... per doz. 60c
Choppers, Enterprise Meat—
No. 12.........................$2 75
No. 22.......................... 4 50

CHUCKS-DRILL.
Standard Tool Co.'s 40%
Goodell's, for Goodell's Screw Drivers.................per doz. $6.25
Yankee, for Yankee Screw Drivers.......................... 5.00

CHURNS.
Anti-Bent Wood, Gal.. 5 7 10
Each $3.85 4.10 4.30
Belle, Barrel................... 70&5%
Common Dash, Gal.... 4 5 7
Per doz................ $6.75 7.50 8.00
Hero...............................70%
Union, Gal............. 5 7 10
Each $3.65 3.90 5.00

CLAMPS
Adjustable—Martin's 40%
Carpenters'—Steel Bar.......... 30%
Carriage Makers'—P. S. & W. Co.'s.......................40, 10&5%
Hose—
Sherman's, brass, ¾ in., ...per doz. 33c
Double, brass, ¾ in...per doz. 65c
Saw Filers—
Disston's list, $30.00........... 30%
Stearn's, No. 0, $3.50, No. 1, $11.50, No. 3, $5.50 doz.
Wentworth's..................... 40%

CLAWS-TACK.
Cast, wood hdle...per doz., 45@ 60c
Forged steel, wood handle ....per doz. 80c
Solid Steel..............per doz. $1.60
Giant....................per doz .60

CLEANERS.
Drain—
Iwan's Adjustable................50%
Iwan's Stationary................40%
Pot--Wire..............per doz. $0.45
Side-Walk—Steel......per doz. 3.15
Window—
Peerless...................50, 10&5%
XLCR..........................65&10%

CLEAVERS.
Family—Ajax, In..... 6 7 8
Per doz $5 50 5 75 6.25

CLEVISES.
Malleable.................per lb. 4¼c

CLIPS.
Axle..............................65&5%
Damper—
Standard ....per doz. $0.70
Troy .... " .28
Hame.................. " .20

CLOTH.
Emery—
Ajax..........................50&10%
B. & A...........................50%
Hardware Wire—full rolls (100 ft.)
2 to 8 mesh black, per 100 sq. ft. $1.85
9 to 12 " " " " 2.15
2 to 8 " galv, " " 2.70
7 and 8 " " " " 3.25
An extra charge is made for 50 ft. lengths, and a still further advance for smaller pieces.
Screen Wire--
12 mesh, painted, per 100 sq.ft. $1.20
14 " " " " 1.85

COCKS--BRASS.
Compression Bibb.......60&10&5%
" Lock..........60&10%
Lever Bibb....................60&10%
Liquor ....per doz..$8 75
Racking ....60&10%

COFFEE MILLS.
Enter. Mfg. Co., list Jan 17, '93...25%
Parker's..........................50%
Arcade.........................60&10%

COLLARS--STOVE PIPE.
Inches 5 6 7
Plain Tin....per gr.$2.50 $2.80 $3 75
Japanned Tin, " 3.90 4.20 5.40
Lacquered Brass" 3.30 3.60 4.80

COMBS--CURRY.
Nos. 000 20 321 330 417 416
Per doz.$0.32 .80 1.00 .95 .80 1.00
Nos. 531 533 530 535 545 300
Per doz $0.96 1.20 1.10 1.65 1.40 1.30

COMPASSES.
Carpenter's..................... 70%
Pencil--Faber's..........per doz.$1.00

COOLERS--WATER.
Galvanized Lined—Lever Faucet.
Gal. 2 3 4 6 8
Each $1.35 1.65 2.00 2.35 2.95
Galvanized Lined—Telegraph Faucet
Gal. 2 3 4 6 8 10 15
Ea$1.65 2.00 2.35 2.65 3.30 3.65 4.90
Porcelain Lined—
Gal. 3 4 5 6 7 8 10
Ea$4.50 5.75 7.00 7.75 8.60 10.40 12.25

COPPER—SEE METALS.

COPPERS.
Soldering--1 to 2 lb.....per lb. 25@29c
2 lb. and larger..... " 23c

CORD.
Picture--White Wire--List October 1900.........................80&10%
Sash--
Baltic Braided Flax...per lb. 21½c
India Hemp, cable laid " 13 c
" " hawser " " 12 c
" " plain " " 13½c
Italian " cable " " 21½c
Russian " " " " 17 c
Samson, white " 31½c
" spot " 30½c
Silver Lake, white " 26½c
" " drab " 31½c

CORKSCREWS.
Humason & Beckley............33⅓%
Walker's.........................33⅓%
Williamson's Regular.............50%
Williamson's Forged Worm.....50%

COTTERS--SPRING.
5-16 in. and smaller...... ......80&5%
⅜-in. and larger...................75%

COUPLINGS--HOSE.
Brass ....per doz. $1.00
Brass Plated............ " 85

COVERS, WAGON--SEE TENTS.

CRADLES--GRAIN.
Morgan's Grapevine ..per doz.$21 00

CRAYONS--SEE CHALK.

CROOKS--SHEPHERDS'.
American Pattern .....per doz. $6 75
Montana " ..... " 8 00
Scotland " ..... " 8 00

CROW BARS.
Pinch or Wedge Point, per 100 lbs.......................... $3 40

CUTTERS.
Meat—
Enterprise Nos. 5, 10, 12, 22, 32, and 42.......................25%
No. 100. list, $18.00...........40&10%
Nos. 2 and 4......................35%
Ideal...................per doz. $9.75
Universal....No. 1 2 3
Per doz............$10.75 $13.00 $18.00
Pipe-Stanwoods No. 1 2 3
Each................$ .85 1.50 4.00
Slaw and Crout--
3-knife Crout..........per doz. $9.25
1 " Slaw........... " 1.50
2 " " .... " 2.10
Washer.................... " 7.75

DAMPERS—STOVE PIPE.
Standard.......................50&10%
American......................40&10%

DIES--STOCKS AND
Discount.......................... 40%

DIGGERS.
Post Hole—
Iwan's Split Handle..per doz. $8.00
Iwan's Perfection....per doz. 8.00

DIVIDERS.
Wing 70%
Extension Wing.............. ...35&5%

DIGGERS—POST HOLE.
Atlas....................per doz. $8.50
Eagle.................. " 6.25
Eureka................ " 6.50
Hercules.............. " 10.25
Ryan's................ " 17.00
See also Augers—Post Hole.

DOORS--SCREEN.
⅞ in. 4 panel painted per doz. $ 6.75
⅞⅜ " " " 7.25
in. 4 panel natural pine, fancy............per doz.. 11.25

DOOR HANGERS—BARN.
Single Flange, D. B. Rail,
.......................per 100 ft. 1 60
Novelty Check Back,
.... 3 in 4 in 5 in 6 in
Per doz. pairs, $2.60 $3.90 $4.95 $6.25

DRILLS.
Bit Stock ....60%&65&5%
Blacksmith's Twist...............60%
Breast--
Common...................each, $2.25
Millers' Falls........... " 2.10
Hand--
Goodell's Automatic--per doz.
No. 01 No. 03 No. 3 No 20
$7.75 $12.50 $14.25 $11.00
Goodell's Single Gear per doz. $16.00
Millers' Falls " " " 12.50
" " Double " " 15.00
Reciprocating—
Goodells'............per doz. $17 00
Bit Stock.
Standard List....60&5%@60%@10%

DRIVERS--SCREW.
Hurwood ....40&10%
Standard.......................65&10%
Ajax.............................70&5%
Champion....................... 50%
" Pattern...............75&5%
Clark's Interchangeable.. .... 33⅓%
Edison............................60%
Reed's Lightning..................50%
Goodell's Spiral..............50&10&5%
Yankee Ratchet....................50%
" " Spiral.....50&10&5%

ELBOWS.
Conductor........................60%
Adjustable Stove—In. 5 6 7
Smooth....per doz. $0.95 0.95 1.40
Plan'd..... " 2.10 2.35 3.00
Corrugated Stove—In. 5 6 7
Smooth.....per doz. $0.95 .95 1.40
Pol'd........ " 1.70 1.75 2.60
Plan'd...... " 2.60 2.85 3.50
Four-Piece Stove—In. 5 6 7
Smooth....per doz. $0.57 .60 .90
Pol'd....... " 1.00 1.05 1.50
Plan'd..... " 1.50 1.70 2.60

EMERY--TURKISH.
Size ....5-lb. pkgs. ¼ kegs, kegs.
No- 60 to 150,℔. 6¼c 4¾c 4½c
Flour.... . " 5¼c 3¾c 3½c

ENAMEL—IRON.
English, ¼-pt. cans...per doz. $1.50
Nubian, " " ... " 1.80
O. V. B., " " ... " 1.25
Peerless 1 50

EXTRACTORS--PIG.
See Forceps, Pig.

EYES.
Bright Wire Screw—See Goods, B.W.
Drifting Pick..................60&10%
Hooks and—
Brass..........................60&5%
Iron ....65&10%

FASTENERS, STORM SASH.
Moore's..................per doz. $0 80
Schroeder's............ " 1 50
Sensible............... " 1 10

FASTENERS, BLIND.
Zimmerman's.........................Net

FAUCETS.
Angle Plug..............per doz. $0 84
Brass--Andrew's ....60&10%
Petroleum...................60-10&5%
Wood--Cedar ....40&50%
Cork Lined.......................60%
Metal Key......................65&5%
Measuring--Enterprise........35&5%
See also Cocks.

FILES AND RASPS
Arcade ....75&5%
Black Diamond..................70&10%
Disston's........................75&10%
Great Western....................75&5%
Keystone Mill....................80&20%
Kearney & Foote ....75&5%
Mill, 2d quality..............80&10&5%
New American ....75&10&5%
Nicholson's......................70&10%
Royal Mill ....80@20%
N. S. A ....70&10&5%

FILTERS.
Improved Natural Stone.$2 50@13 50
Subject to large discounts.

FORCEPS—PIG
Barber's................per doz , $7 25
Superior.............. " 4 75
Whisson's Imp 6 00

FORKS
Barley—
Steel......................66⅔, 10&5%
Wood, 4 tines,$5.25: 6 tines.$6.25 doz
Coal.........................70, 10&2½%
Coke ....70, 10&2½%
Cottonseed.................70, 10&2½%
Hay—
Diamond, 2 tine..........65, 10&5%
" 3 " ......60, 7½, 10&5%
" 4 " ....66⅔, 10&5%
Golden Eagle, tine 60,7½,10,10&5%
" " " ..66⅔,10,10&5%
Digging........ ....65&10&5%
Scoop ....70&10%

FORKS—CONTINUED.

Hay—
Diamond, 2 tine.....67½&10&5%
" 3 " .....60, 20, 10&5%
" 4 " .....66⅔&10&5%
Golden Eagle, 4 tine.....10&10&5%
Manure—
Diamond .....60 20, 10&5%
Golden Eagle.....60, 20, 20&5%
Ore.....70&10%
Spading—
Diamond .....70, 5, 10&5%
Golden Eagle.....70, 5&10%
Hack Saw— FRAMES
Crown.....per doz., $ 6 25
Miller's Falls..... " 10 00
Star..... " 2 85

FREEZERS—ICE CREAM

Arctic—Qts... 1 2 3 4 6
Each $1 10 1 30 1 50 1 75 2 30
Qts..... 8 10 12 15
Each $2 85 3 75 4 50 5 20
White Mountain, with Crank—
Qts..... 1 2 3 4 6
Each $1 20 1 65 1 90 2 10 2 70
Qts..... 8 10 12 15
Each $3 60 4 60 5 90 7 00

GATES.

Molasses and Oil.
Perfection.....50&5%
Stebbin's.....75&10&5%

GAUGES.

Butt and Rabbet.
Stanley R. & L. Co.'s ..20&10&2½%
Cream Pail, Fairmont, per doz..$3 75
Marking, Mortise, etc.....
.....50&10%@50&10&5%
Saw—Atkin's agle. 55c, dbl. 80c pr doz.
Wire.
Disston's.....25%
P. S. & W. Co.'s.....20%

GIMLETS.

Discount..... ... .40@40&10%

GLASS—WINDOW.

Single and double strength, 6x8 to 16 x24..... .....90&5%
Larger sizes .....90 10&5%

GLASSES—LEVEL.

Stanley R. & L. Co.....50&5%

GLUE.

Bulk.
B Amber .....per lb 9¾c
A White.....per lb 12½c
H. S. Amber.....per 'b 17 c
Liquid.
Eagle .....40 %
LePage's—
List "A".....37½%
List "B".....33⅓%
List "C".....25 %

GOODS.

Bright Wire..... 80&15%

GREASE, AXLE.

Wood Boxes.
Diamond.....per gr. $5.00
Frazer's..... 9.25
Hub Lightning..... 5.25
Paragon..... 6.75
Wood Pails.
Frazer's, 15 lb. 78c, 25 lb. $1.30 each.
Hub Lightning, 15 lb. 52c, 25 lb. 68c each.
Tin Cans.
1 lb. Frazer's carriage, pr. doz. $1.30
1½ lb. " wagon.. " 1.30
3 lb. " " " 2.40
5 lb. " " " 3.50

GRIDDLES

Soapstone .....40&5%

GRINDSTONES

Family—In..... 7 8 9
Per doz $3 25 9 50 11 00
Loose.
Per ton .....$20 00@$21 00
Mounted—
Ball Bearing..... 1 2 3
Each $3 30 3 10 2 95
Common Bearing.. 1 2 3
Each $2 90 2 70 2 55

HAFTS—AWL

Brad—Common.....per doz., $0.18
Peg—
Common..... " 21
Patent, plain top..... " 48
" leather top .. " 52
Sewing—
Common..... " 21
Patent..... " 53

HALTERS

Jute Rope.....per do $0 80
Sisal Rope... ..... " 1 95
Web ..... " 2 10
Leather, rope tie..... " 6 25
" leather tie... " 8 25

HAMMERS—HANDLED

Blacksmiths' Hand
Maydole's .....40&10%
Engineers'—
Maydole's .....40&10%
Farriers'.
Maydole's ....35&5%
Machinists'.
Maydole's .....40&10%
Nail.
Ajax.....per doz $5 75
Calumet..... " 3 40
Cast..... per doz $1 10@$1 50
Maydole's .....30&7½%
Vulcan .....35&5%
Riveting.
Maydole's.....35&5%
Shoe.
Cast.....per doz 75c

Tack.
All Iron .....per doz $0 35
Pol'd Iron, Hickory hdl " 0 53
Mall. Iron, Inlaid..... " 1 50
Magnetic 1 2 3
Per doz..... 70c 80c 95c
Magazine.....per doz $4 75

HAMMERS—HEAVY.

Heavy Hammers and Sledges.
Under 5 lbs.....70&10%
5 lbs. and over 75%
Masons'—Single & Double Face..75%
Auger. HANDLES.
Common Ass'd.....per doz $0 26
Peck's Adjustable.... " 2 10
Roger's " .... " 4 15
Ives' " ....per set 1 25
Axe.....40%
Chisel.
Hickory, Tanged Firmer, Assorted, 24c; Large, 26c per doz.
Hickory, Socket Firmer, Assorted, 18c: Large, 21c per doz.
Applewood, Tanged Firmer, Assorted, 27c; large, 36c per doz.
Applewood Socket, Firmer, Assorted .....per doz 24c
Coal Pick 40%
Drifting Pick..... .....40%
File, assorted 13c. large 16c per doz.
Hammer.
Adze Eye.....per doz 42c
Blacksmiths'.....per doz 45c@65c
Machinists'..... " 39c@56c
Hatchet.....per doz 42c
Hay and Manure Fork.....40&10%
Hoe and Rake .....40&5%
Saw, Plain 72c, Varnished 68c per dz.
Screw Driver, Assorted 42c, Large 48c per doz.
Shovel and Spade ..... .40%

Barn Door—HANGERS
King .....per doz. prs., $ 50
Monarch .....60&10%
"Never Jump" Hinge.....50&10%
Peerless, Loose Axle.... ..60&10%
Perfection, Roller Bearing..70&5%
Phœnix, Roller Bearing... 70&5%
Prouty .....per doz. prs., $5 50
Rival. ..... " " 3 90
Superb ..... " " 6 25
Safety Flexible " " 6 65
Wagner's Adjustable.....70@10%
Warehouse 60%
Conductor Pipe—
Iwan's Perfection.....50%
Parlor Door—
Acme.....per set $3 75
Ives' Improved ..... " 3 50
Lane's Standard..... " 3 50
" New Model.... " 2 80
Prouty..... " 3 00
Lundy.....50&10%
Eave Trough—
Baker's.....per gr., $2 60
Imperial 10%
Wire 25%

HASPS.

Hinge, Wrought.....70&5%
With Staples—See Staples.

HATCHETS.

Ajax .....40&10&5%
Blood's.....40&10%
Cast Claw.....per doz $1 50@$1 75
Cast Shingling.... " 1 20
Duffy's Barrel.....per doz 17 50
Germantown .....35&5%
Hammond's .....30&10&5%
Roger's Ideal.....per doz $5 25
Underhill's Star Lath.....40%
S. A.....30&10%

HAY RACK BRACKETS.

Wenzlemann's No. 1, per doz...$12 60
" No. 2, " ... 13 20

HINGES.

Blind.
Clark's Gravity, per doz sets....80c
Parker's..... .....65%
Shepherd's Noiseless, for Wood casing.... .....doz. $1 05
Gate.
Clark's, 1 2 3
Hgs & Ltchs, dz.. $2 35 $2 60 $3 60
Hinges Only, " .. 1 70 1 90
Latches Only, " .. 0 70 0 75
Knuckle.....per doz prs $6 00
Leed's..... " sets 6 75
Superior ..... " prs 9 25
Spring.
American.....25%
Bommer Bros. Ball B'rng Floor 40%
Bommer Bros. Spring Hinges .40%
Chicago.....25&5%
Clover Leaf.....per gro $9
Columbia Dbl. Acting....40&10&5%
Gem 25%
Ideal Detachable,....per gro $12 00
New Idea ..... " 9 60
Oxford.....20%
Wrought Iron.
Light Strap Hinges.....80&10%
Heavy Strap Hinges.....
.....80-10-10&5%
Light T Hinges.....75-10&10%
Heavy T Hinges .....75&10%
Extra Heavy T Hinges.....
.....80-10&5%
Cor. Heavy Strap .....80-10-10&5%
Cor. Ex. Heavy T .....80-10&5%
Screw Hook and Strap.
6 to 12in.....per 100 lbs. $4.00
14 to 20in ..... " " 3.75
22 to 36in ..... " 3.50
Screw Hook and Eye.
⅝ to 1in .....per 100 lbs. $6.50
⅜in ..... " " 8.00
½in ..... " 10.00

HOES.

Garden.....75&10&5%
Grub:
Ajax .....50&10&5%
Extra.....60&10%
Hazel.....per doz $6 25
Ladies' and Boys'.....70, 10, 5, 10&5%
Mortar.....75, 7½, 10&5%
Planter's Eye.....60&10&2½%
Weed .....70, 10, 10&5½%

HOOKS.

And Eyes.
Brass .....50&10&5%
Iron..... .....65&10%
Awning.....per gro $1 80
Belt.....75&5%
Bench—See Stops, Bench.
Box, In. 6 8 10 12
Doz.. $1 25 $1 60 $1 70 $2 25
Humason & Beckley's...pr dz $2 40
(See Goods, Bright Wire.)
Bush.
Common Axe Handle
..... per doz $7 00@$8 50
Hamilton Pattern.....per doz $7 25
Chain—In. ¼&5-16 ⅜ 7-16 ½
Per 100 $7 50-7 75 $9 50 $11 25 $12 00
Clothes Line.
Japanned.....per doz 21c@22c
Galvanized..... " 35c
Coat and Hat.
Cast Iron.....per gro 72c@$1 00
Gem Wire.....65&10%
Conductor.
Malleable.....50&10%@50&10&5%
Wrought.....40&10%@50%
Corn.
Common, unpolished, per doz. $1 30
" polished... " 1 70
"Cut Easy," .....per doz. 2 65
Clyde's, ... " 2 40
Brooke's..... " 2 65
Gate.—See Goods, Bright Wire.
Grass.
Common, Nos. 2 3 4
Per doz..... $1 70 $1 75 —
German .....per doz $1 90
Little Giant..... " 3 10
Wood's..... ... " 1 30
Hammock.
Common..... " 21c
With Plate..... " 36c
With Screw..... " 36c
Piggot's..... " $1 05
Lambrequin or Drapery...per gro 21c
Picture .....50%@50&10%
Potato and Manure.....70&10&7½%
Screw, Brass.....80&20%
(See Goods, Bright Wire.)
Seat Spring .....per lb 6½c

HOOPS—TUB.

Ever Ready..... per case $1 65

HOSE—GARDEN.

Ply 3 4 5 6 8
Black, pr ft. 7½c 8½c 9¾c 10¾c 12½c
Cotton, 3 ply.....per ft 6¾c
Red, 3 ply ..... " 7¾c

HUSKERS.

Boss.
Nos. E A B P PX
Dz.$1 85 $2 00 $1 95 Gr.$5 90 $5 20
Nos.2000 3000 4000 O OX
Gr.$3 10 $6 75 Dz.$1 15 $2 20 $1 65
Brinkerhoff's .....per gro 14 50
Harrington..... ....per gro 4 20
Ideal—Nos. 102 101 100
Per doz..... $1 35 $2 50 $2 75
Johnson's ....per gro 7 75

IRON.

See Metals—First column.

IRONS.

Curling.
Common ....per doz 33c@48c
Princess.....per doz $0 60
Yale..... " 0 84
Oxford..... " 1 10
Ruby ..... " 1 50
Tourist, Folding ..... " 0 90
Pinking..... " 0 60
Plane.
Wood Bench.....20&5%
Stanley R. & L. Co. (new list)25&5%
Sad.
Charcoal.....per doz $11 25
Common, Polished, per 100 lbs 3 50
" Nickel Plated, " 4 75
Chinese Polishing.....per doz 7 60
Laundry, No. 1, $5 75; No. 2, $6 25 per doz.
Mrs. Pott's.
No. 50 J, Enterprise...per set 76c
No. 55 J, " ... " 73c
No. 50 T, " ... " 79c
No. 55 T, " ... " 76c
No. 50, Howells ..... " 77c
No. 55, " ..... " 74c
Tailors' Sad .....per lb 4¼c
" Geese..... " 4¼c
Tuyere.
Single Duck Nest.....per doz $5 25
Double " " ..... " 6 25
Sutton.....each 2 60

JACKS.

Locomotive .....75&5%
Wagon.
Meeker's .....per doz $1 25
Miller's No. 2 ..... " 7
Winner..... " 7

KETTLES.

Brass.....20%
Caldron..... 50%
Copper.....per lb 27½c
Maslin..... .....65&10%
Sugar .....50&10&5%

KNIVES.

Beet Topping.
Clyde, 9-in. Scimiter Blade.dz $4 25
" 12-in. Straight " .dz 2 50
Cooper's Hoop ... .15%
Corn.
Acorn.....per doz $2 65
Ajax..... " 2 25
Clipper, Light, $1 75; Heavy, $1 90 per doz.
Disston's.....per doz $2 15
Easy ..... " 7 75
Rugged Razor ..... " 2 40
H. S. Earle's ..... " 3 15
Drawing.
Standard.....70%
Adjustable 30%
Barton's Carpenters'.....10&5%
" Folding Handle.....25&5%
Hay.
American, Sickle Edge...doz $10 25
Canton, Sickle Edge..... " 8 25
Heath's..... " 8 25
Iwan's Sickle Edge..... 10 00
Lightn'g, Holt's Genuine " 6 50
Lightning Pattern..... " 6 25
Wadsworth's Sp'r Point. " 8 75
Hedge.
Ajax, Heavy, $5 75; Ex. Heavy, $7 75 per doz.
Mincing.
Common, Single .....per doz 42c
" Double..... " 65c
Streeter, 4 Blade, $1 30; 6 Blade, $1 90 per doz.
Putty.
Common.....per doz 84c
Goodell's.....per doz $1 30@$1 80
Russell's. ..... " 1 75@ 2 25

KNOBS.

Base, 2¼-in. Maple, Rubber Tip,
.... per gro $1 00
Door, Mineral.....per doz 0 80
Porcelain ..... " 0 90
Jet..... " 0 85
Picture.....60&10&5%

LADDERS.

Common Long .....per ft 8½c@13c
Extension .....per ft 10½c
Step.
Common..... " 6½c
" With Shelf, add 10c.
I X L.....per ft 17c
Miller's Household. per ft 13c@15c

LANTERNS.

Bull's Eye Police.
3-in Flash Light.....per doz $6 00
2¾-in Regular..... " 4 00
3-in Regular..... " 5 00
Tubular, Berger.....40&10&5%

LEADERS—CATTLE.

Nos. 1 2 3
Per doz... $0 70 $0 85 $3 75

LEATHER—LACE.

Cut .....50&10%
Sides, Ex. Quality.....per sq ft 20c

LEATHERS—PUMP.

Valve and Plunger.....50%

LIFTERS.

Stove Cover.
Japanned.....per gro $2 75
Coppered..... " 3 60
Chilkoot..... " 4 50
Devore's..... " 5 50
Zero ..... " 3 90
Transom, Payson's.....70&10%

LINES.

Chalk, Twisted in 20-ft hanks.
Nos. 15 14 13 12 11
Per doz.. 10c 12c 17c 22c 26c
Twisted in 50-ft balls.
Nos. 1 2 3 4
Per doz..... 24c 30c 36c 44c
Braided in 20-ft hanks.
Nos. 0 1 2
Per doz..... ..... 23c 26c 32c
Masons', in 100-ft hanks...doz $1 00
Clothes.
60-ft Jute .....per doz $0 95
72-ft " ..... " 1 10
60-ft Sisal ..... " 1 60
72-ft " ..... " 2 10
60-ft Cotton..... " 1 35
50-ft Braided Cotton.....95%

LINING—STOVE.

In Bricks.....per crate 42c

MACHINES.

Boring	Without Augers.	With Augers.
Ajax .....per doz	$5 25	$6 75
Angular... "	3 25	5 00
Boss ..... "	4 50	5
Upright... "	2 90	4

Leather Riveting.
Chicago, Pomeroy ....per doz $9 75
Excelsior..... " 2 50
Handy..... " 2 10
Little Giant..... " 3 10
Pony, Pomeroy..... " 8 00
Washing.
Boss. 1 2 5 3
Per doz.. $57 00 $63 00 $69 00 $60 00
Globe, No. 1.....per doz $51 00
O K Rotary ..... " 58 00
Round Wayne..... " 26 50
U. S. Steel..... " 60 00

MALLETS.

Carpenters'.
Fibre Head, Small. Med. Large.
Per doz..... $5 00 $5 75 $6 75
Round Hickory.....per doz $1 75
" Lignumvitæ.... " 2 75
Square Hickory..... " 1 75
" Lignumvitæ .. " 3 25
Tinners'.
Applewood ..... " 1 65
Hickory..... " 90
Hickory Sheet Iron. " 85

MATS.

Door.
National Rigid ..... 60&5%
Queen Flexible 50%

Stove.
Standrd Quality ..... per gross $3 75
Best " (Pure) " 4 75
Wire Covered Asbestos, Ex. Heavy ..... per doz 1 00

MATTOCKS.

Ajax ..... 50&10%
Extra ..... 60&5%

MAULS.

Iron, lbs.	10	13	16	18	21
Per doz.	$3 40	$4 20	$5 00	5 50	$6 00
Wood face, lbs.	10	11	12		
Per doz.	$4 75	$5 00	$5 25		

Wood Choppers'.
Lake Super'r & Oregon Pat. 70&10%

MEASURES.

	½ pk	1 pk	½ bu
Galvanized..per dz		$3 75	
Japanned.... "	$1 50	2 25	$2 90
Iron Bound. "	1 40	1 70	2 00

Babbitt. METAL.

Alm ..... per lb 8¼c
Best ..... " 23c
Common, No. 4 ..... " 6½c
Copper Mixed ..... " 18½c
Magnolia Metal ..... " 19c
Tony ..... " 10¼c
See Metals—In first column.

MICA.

First Quality ..... 40, 10&5%
Second Quality 60%

MILLS—COFFEE.

Enterprise ..... 25&5%
National 30%
Parker ..... 50&10%@60%

MOPS.

Erie ..... per doz $3 15

Handled Cotton.

Lbs.	¾	1	1¼	2
Per doz..	$1 85	$2 20	$2 50	$3 15

MOWERS—LAWN.

Ball-Bearing.

In.	15	17	19	21
Each.....	$7 50	$8 50	$9 50	$10 50

Champion.

In.	12	14	16	18	20
Ea..	$2 30	$2 35	$2 35	$2 65	$2 75

Champion, High Chief.

In.	16	18	20
Each.....	$4 00	$4 50	$5 00

Cheap Grades.

In.	12	14	16	18
Each.....	$2 10	$2 10	$2 10	$2 20

Clipper ..... 50&10&10%
Girard, in. 14 16
Each $3 75 $4 00
Philadelphia.
All Styles Except A & E 60&10&10%
Style A ..... 50&10%
Style E, High Wheel..60,10,10&10%
Drevels 50%
All Day ..... Net Price

Horse. MUZZLES.

Nos.	1	2	3	4	5
Doz.	$0 30	$0 50	$0 55	$0 70	$1 00

Horse Shoe. NAILS.

Ausable 50%
Capewell 10%
Perfect ..... 40&5&
Putnam 33⅓%
Star 35%

Picture.
Brass Head ..... 40&10%
Judd's ..... 40&10%
Brads ..... 80&10&10%
Wire Nails—Small lots $2.30
Car load lots 2.20

NETTING—POULTRY.

Galvanized Before Weaving. 80&20
" After Weaving... 80&15
Cut Pieces ..... 65&5%

NIPPERS.

End Cutting.
P. S. & W. Co. ..... 40&5%
Stubb's Pattern ..... 40&10&5%

Hoof.
Heller's ..... 40&5%
P. S. & W. Co. ..... 40&10%
V. & B 40-5%

Hose. NOZZLES.

Genuine Boston ..... per doz $3 40
Genuine Gem ..... " 3 60
Magic ..... " 3 60

NUTS—HOT PRESSED.

Square Blank.

In.	¼	⅜	½	⅝	¾	⅞	1
Lb.	7½c	5¼c	4⅞c	4⅝c	4⅝c	4¼c	4¼c

Square Tapped.

In.	¼	⅜	½	⅝	¾
Lb.	14c	9½c	7¼c	6½c	6¼c

OILS.

Linseed, Pure boiled ..... per gal 37c
" " raw ..... " 36c

OILERS.

Chase Pattern.
Brass and Copper 35%
Zinc 60%

Engineers'.
Cannon 50%
Tin ..... per doz $2 75@$3 25

Machine.
Ajax ..... per doz $0 80
Copper Plated Steel... " 1 50
Malleable Iron ..... 40&10&5%
Tin ..... per doz 55c@65c

OPENERS.

Box, in.	10	12	14
Flat ...per doz	$2 85	$3 60	$4 15
Round.. "	2 10	2 25	2 [illegible]

Can.
American ..... per doz $0 26
Delmonico ..... " 1 35
Never Slip ..... " 0 45
Perfect ..... " 85
Tip Top ..... " 0 84
Crate, V. & B ..... " 5 75

OUTFITS—COBBLING.

Combination ..... per doz $11 50
Economical ..... " 4 90
Family ..... " 10 00

PADLOCKS.

Standard Wrought ..... 70&10&5%
Champion 50%
Eureka ..... 40&10&5%
Yale ..... 60&5%

Cream. PAILS.

14-qt., Without Ga....	per doz	$2 75
20-qt., " "	"	3 25
20-qt., With Gauge....	"	4 20

Sap, 10-qt., Galvanized, $1 60; 12-qt., Galvanized, $1 85 per doz.

Stock, Galvanized.

Quarts.	14	16	18	20
Per doz...	$3 75	$4 00	$4 65	$5 25

Water, Galvd, qts. 10 12 14
Per doz $2 00 $2 30 $2 60

Wood.
Cable, 2-Hoop, $1 70; 3-Hoop, $1 90 per doz.
Cedar, 3-Hoop, $2 50 per doz.
Standard, 2-Hoop, $1 55: 3-Hoop, $1 75 per doz.

PANS.

Dripping ..... 50&10&5%
Fry, Common ..... 60&10&5%
Acme ..... 60%&5%

Roasting.
Brownie ..... Each 30c@37c
L. & H ..... " 58c@80c

Building. PAPER.

Plain ..... per 100 lbs $1 15
Tarred ..... " 1 25
Tarred Felt ..... " 1 80
Diamond A, Red Rosin. pr roll 0 63
Leader, Red Rosin ..... " 0 48

Sand and Emery.
Ajax ..... 50&10%
B. & A ..... 50 & 5%

Wrapping.
Grecian Express ..... per lb 3¾c
Rag ..... " 2½c

Apple. PARERS.

Bay State ..... per doz $13 00
Reading ..... " 6 75
Turntable ..... " 6 00
White Mountain ..... " 5 25

Potato.
Goodsell's Saratoga..per doz. $6 50
White Mountain ..... " 6 00

PICKS

Adze Eye Ore ..... 60&5%
Drifting and Poll Picks ..... 60&10%
Ajax Railroad ..... 50&5%
Extra Railroad ..... 60&10%
Surface ..... 60&10%

PINCHERS.

Carpenters', wrt. iron, pol. steel jaws 30%
Blacksmiths' 50%
P. S. & W. ..... 40&10&5%

Clothes. PINS.

Common ..... per gr..$0 12
Hoyt's ..... " .. 30
U. S ..... " .. 70

Picket.
Fluted ..... per doz..$0 90
Round ..... " .. 1 75
Spiral ..... " .. 1 90

PIPE.

Conductor.	Nested	Not nested
Eastern	70&12½%	70&7½%
Central	70&7½%	70%
Southwst'n..	65-&7½%	65&3½%
Mo. River....	70&7½%	70%
Southern	65&10%	65&5%

Lead.
Full coils ..... per lb..$0 6
Cut " ..... " .. 6¼

Stove.

Acme—In.	5	6	7
Smooth, per jt.	10¼c	10¼c	12½c
Planished, "	..32c	33c	43 c
Peerless--Smooth..	8½c	9c	11½c
Polished.	16c	18c	22 c
Planished	28c	31c	40 c

Made-up—In.	5	6	7
Smooth.....	8½c	9c	12 c

7 to 6 in. Smooth Tapers, pr jt..14c
6 in. Smooth T's ..... " ..30c
7 to 6 in. Planished Tapers 45c

Wrought Iron Gas Pipe.
¾-in., black ..... discount, 60%
½ " ..... " 63%
¾-in. to 4-in, black ..... " 69%
4½ " 6 " ..... " 66%
7 " 12 " ..... " 64%
¾ " galvanized " 48%
½ " " " 50%
¾ " to 4 " " 36%
4½ " " 6 " " 52½%
7 " " 12 " " 50%

PLANES.

Ohio ..... 60&5%
Stanley Planes, new list..30%@30&5%
Bailey Planes 35%
Sandusky 20%

Corn, PLANTERS.

Monitor ..... per doz..$7 75
Triumph ..... " .. 6 00

Potato
Acme ..... per doz.. $6 25
Challenge ..... " .. 10 75

Fencing.
Cronk's ..... per doz..$9 25
Farmers' Choice ..... " .. 8 75
Russell's ..... " .. 8 65

Flat and Round Nose.
Bernard's 30%
German 50%
Lodi 40%
Paragon ..... 40&10%
P. S. & W. Co. 60%

Gas—In. 8 10 12
Per doz $3.10 $4.00 $4.90

PLUMBS AND LEVELS.

Common ..... 75%@75&10%
Cook's 40%
Davis' Iron 30%
Davis' Inclinometer 30%

Stanley's

Nos.	00S	0S	2S	3S
Per doz..	$4.50	$5.20	$7.60	$8.65
Nos.	30	25	50	35
Per doz.	$13.00	$17.50	$17.50	$12.35

POINTS. Discount

Drive Well Points ..... 80&10&5%

POKERS—STOVE.

Wr't Iron, str't or bent, per doz.$0 50
Wr't Iron, wood hand'ls " 75
Nickel pl'td. coil hdl's.. " 70

POKES--ANIMAL.

American ..... per doz $2 60
Brown's, wr't steel " ..$5 25@6 25
Eagle ..... " $4 25
Success ..... " 2 60

POLES--FISHING.

Bamboo

Ft.	12	14	16	18	20
Pr 100..	$2.75	$3.40	$4.75	$6.00	$7.75

POLISH.

Metal.
Pride of the Bar ..... " .. 1 60
Putz Cream.

Pts.	1-6	¼	½
Per doz.....	$0.84	$1.25	$1.80

Pts.	1	2	4	8
Per doz.	$3.60	$6.00	$9.00	$18.00

White Silk, half pints, per doz.$2.00
White Silk, 6 oz. cans, per doz. 1.00
Wondershine

Pts.	1-6	½	1	2
Per doz...	$0.68	$1.30	$2.15	$3.00

Shoe.
M. D. C. ..... per doz..36c@50c
F. C. O ..... " 40c
T. M ..... " 50c@$1 25
Imperial ..... per gr. $5 00

Stove.
Black Eagle, 1 lb cans, pr gr..$15 00
Black Silk—
5 lb. pail 70c
Paste, 5 oz. cans per doz..... $1.00
Paste, ½ lb cans, per doz... 1.00
Black and Japanned—
Liquid, ½ pint cans per doz. 1.00
Liquid, 6 oz. cans per doz.... 75c
Steel Range Gloss per doz... 1.75
Blackene, 1 lb cans.... pr gr.. 13 00
Black Jack, ¾ lb cans. " .. 9 00
Dixon's Carb. of Iron. " .. 5 75
Nickel Plate ..... " .. 4 50

POPPERS, CORN.

Round or Square, 1 qt. per doz., 85@95c
Square, 1½ qt ..... per doz., $1 00
Square, 2 qt ..... per doz., 1 25
1 qt. reversible ..... per doz., 1 50

POTS—FIRE.

Bernz ..... each..$3 85
Clayton & Lambert's, each, $4 75@6 25
Gate City ..... each.. 6 25
Gem ..... " .. 6 75

POWDER.

See Ammunition.

PRESSES—FRUIT AND JELLY.

Enterprise Manufacturing Co... 25%
Henis ..... per doz. $2 10

PRUNERS.

Disston's Pole ..... per doz..$7 50
Henry's Improved.. per doz..65&10%
Water's Improved. " 70, 10&5%

PULLERS.

Cork.
Modern ..... each..$2 60
Quick and Easy ..... " .. 3 90

Nail.
Giant ..... per doz..$0 00@10 50
Giant Pattern. " .. 6 00

Tack—Giant .... " .. 60

PULLEYS.

Awning--Jap'd ..... 40&5% to 35&5%
Clothes Line ..... 20&10%
Hay Fork.
Iron Wheel, 5 in ..... per doz..$1 70
Wood Wheel, 6 in ... " .. 1 60
Wood Wheel, 6 in... pass knot ..... " .. 1 75
Hot House--Jap'd ..... 30&5%
Screw ..... " ..... 30&5%
Side ..... " ..... 30&5%
Sash.
Chicago ..... per doz..$0 29
Clark's ..... " .. 43
Common Sense, 3 in.. " .. 27
" Pattern, 3 in.. " .. 23
Empire ..... " .. 24
Ideal ..... " .. 24
Grand Rapids, No. 17 " .. 24
" " No 11 " .. 25

PUMPS

Pitcher Spout.

Nos.	1	2	3	4
Each.....	$0.95	$1.05	$1.15	$1.40

Spray.
Blizzard ..... per doz..$14 25
Cyclone, tin ..... " .. 3 90
" copper ..... " .. 6 75
Daisy ..... " .. 8 75
Little Giant ..... each.. 2 40

PUNCHES.

Conductors', No. 22 .... per doz..$2 50
Machine ..... per lb . 19
Saddlers'.
Common ..... per doz..60c@70c
Good ..... " ..72c@84c
Spring.
1 Tube ..... per doz. $2 25

PLATES--TIN.

See Metals in Column 1.

PLIERS.

Button's--In.	4½	6	8	10
Per doz.....	$2.60	$2.10	$2.90	$5.20

Button's Pattern.

In.	4½	6	8	10
Per doz....	$2.35	$2.50	$3.45	$4.40

Cutting.
Cronk's Comb ..... per doz..$6 25
Bernard's 30%
Lodi ..... 40&10&5%
Stubb's 50%
4 Tube, revolving.... " .. 5 25

Tinners'.
Hollow 40%
Solid ..... each..5½c

PUTTY.

In Bladders.
Strictly pure ..... per 100 lbs. $2 35
Commercial ..... " " 2 10

RAIL.

Barn Door.
Light Wrought .. .. per ft. 3c
Safety .... " 4½c
Single Flange ..... " 1¾c
Smith's Wro't Bracket—plain 3¼c
Smith's Special 4¼c
Smith's "Never Jump"..... 11c 50%
Smith's Plain Steel 30%
Smith's Milled Steel 4¼c

Sliding Door.
Painted iron ..... per ft. 4¼c
Bronzed wr't iron..... " 8½c

RAKES.

Coal or Road ..... per doz. $5.25

Garden.
Steel, braced ..... 70&10&5%
Steel, bow ..... 70,5,10&5%
Malleable iron, heavy..... 70@10%

Hay—Wood ..... per doz. $1 05@1 70

Lawn—Wood.
Common ..... per doz. $2
Automatic ..... " 6 00
New Lawn Queen .... " 3 60
Jumbo, 36 teeth ..... " 5 75

RASPS—See Files.

REGISTERS.

List July 1, 1903.

White Japanned ..... 75&10%
Nickle Plated ..... 75&10%
Copper ..... 75&10%
Electro Plated Brass 50%

RINGS

and Ringers—Hog.
Blair's Rings ..... per doz. 60c
Blair's Ringers ..... " 84c
Brown's Rings ..... " 65c
Brown's Ringers ..... " 90c
Champion Rings ..... " $2 25
Champion Ringers ..... " 1 70
Hill's Rings ..... " 48c
Hill's Ringers ..... "70c@95c
Mazor Rings ..... " 80c
Mazor Ringers ..... " $1 15
Perfect Rings ..... " 84c
Perfect Ringers ..... " $1 05
Wolverine Rings ..... " 1 50
Wolverine Ringers .... " 70c

Bull.

Copper,	2½-in.	3-in.
per doz	$1 35	$1 70

Steel ..... per doz. 95 1 05
Steel, Nickel Pl't'd, 2½-in., doz. 1 35
Rea's Self Piercing.. ..... $1.95
Fruit Jar—White ..... per lb. 30c

Key.
Split, round ..... per doz. 1
Split, square ..... " 22c
Ball, round ..... " 22c

RIVETS.

and Burrs.
Copper Belt ..... 50&10&5%
Coppered Iron 75%
Tinners' ..... 66⅔%@60%
Hame ..... per lb.
Slotted Clinch ..... per doz. 70c@75c
Tubular—Nos. 1 and 2, assorted sizes ..... per doz. 60c

ROPE.

Per lb.

Manila, 7-16 inch diameter and larger 11¾c
Sisal, 7-16 in. and larger..... 8½c

Cotton.
¾ and 5-16-in. on reels...per lb. 13c
¾ and 5-16-in. in coils... " 12½

RULES.

Boxwood 60%
Ivory ..... 35&5%

SASH WEIGHTS.

Per ton, f.o.b. Chicago $30.00

SAWS.

Back.
Disston's ..... 35&7½%
Jackson's ..... 35&7½%
Butchers'—Disston's ..... 35&7½%

Circular.
Disston's 50%
Hiles' 50%

Compass.
Common ..... per doz. $1 35@1 60
Disston's ..... 35&7½%

Cross-Cut.
Atkin's 40%
Disston's ..... 40&10% &50%
Pocahontas Bit ..... per ft. 29c
Pocahontas, Blued ..... " 41c

Dehorning.
Atkins' ..... per doz. $5 50
Disston's ..... " 5 75

Hack.
Disston's 35½%
Kevstone 33⅓%
Sterling Hack Saw Blades..... 25%
Sterling Hack Saw Frames.... 30%

SAWS—CONTINUED.

Hand and Rip.
Brown's ....30&7½%
Disston's No. 7....30&7½%
Disston's Nos. 8, D8, 12, 76, 112, D100, and 120....25&7½%
Gorham's Comb....30&7½%
Keystone....30&7½%
Sam Sickles', hand...per doz. $4 25
"I Will," hand.... " 5 75
"I Will," rip.... " 6 75
"U. S. A." hand.... " 12 25
"U. S. A.' rip.. .... " 14 25
Keyhole—Disston's ....25&7½%
Kitchen.
Sterling....25%
One Man 50%
Panel.
Brown's ....30&7½%
Disston's No. 7....30&7½%
Disston's Nos. D8 and 12, D100 and 112....25&7½%
"I Will" 40%
"U. S. A." ....40&10&5%
Pruning.
Avery's Duplex ....25&7½%
Brown's ....25&7½%
Disston's....25&7½%
Wood.
Common....per doz. $4 50
Handy .... " 7 50
Happy Medium .... " 7 00
Wood Sawyers' Delight " 8 25

SAW SETS.

Common Lever....per doz. $ 1.20
Stillman's Lever....per doz. 1.30
Leach's....per doz. 5.00
Nash's....per doz. 4.20
Monarch....per doz. 6.50
Atkin's Pattern....per doz. 3.50

FRAMES—SAW.

Common, plain....per doz. $1 20
" painted.... " 1 60
Counter. SCALES.
Fairbank's Standard....30, 10&5%
Hatch's....per doz. $21 50
Little Detective, 1 2 3
Each $2 00 2 25 2 10
No. 1 Tea ....per doz. 7 75
Union Platform....each 2 35
Pelouze 25%
Turnbull's Market....50%
Platform.
Common, 600 800 1000
Each $8 75 9 75 10 75
Chicago Standard....30 to 33⅓%
Fairbank's Standard....40%
Osgood....50%

SCOOPS.

Ames....10&10%
Eastern Pattern. Socket Strap.
Nos. 2 3 4 5 6
Per doz. $7.00 7.25 7.50 7.75 8.00
Nos. 7 8 9 10 12
Per doz. $8.25 8.50 8.75 9.00 9.50
Western Pattern. Socket Strap.
Nos. 1 2 3 4 5
Per doz. $7.00 7.25 7.50 7.75 8.00
Ajax. *Eastern Pattern,*
Nos. 2 3 4 5
Per doz. $5.25 5.50 5.75 6.00
Nos. 6 7 8 9
Per doz. $6.25 6.50 6.75 7.00
Ajax. *Eastern Pattern,* extra heavy,
Nos. 3 5 6 7
Per doz. $7.25 7.75 8.00 8.25
Ajax. *Western Pattern,*
Nos. 4 5 6 7
Per doz. $5.75 6.00 6.25 6.50
Nos. 8 9 10 12
Per doz. $6.75 7.00 7.25 7.75

SCRAPERS.

Box.
Stanley's Adjustable, per doz. $3 60
Triangular .... " 2 10
Cabinet.
Ajax ....per doz. $2 25
Cast Steel .... " 65c@75c
Stanley's No. 80.... " $8 40
Road.
Cubic ft. 7 5 3
Without runners, ea. $5.00 4.75 4.50
With runners... " 5.25 5.00 4.75

SCREWS.

Bench.
Iron....30%
Wood, white maple..per doz..$3 60
Hand—Wood....20%
Hand Rail....70&10%
Jack....75&5%
Lag or Coach. Gimlet Point....75%
Saw—Centennial.
Nos. 1 2 3 4
Per doz.... 22c 25c 32c 36c
Wood.
F. H. Bright Steel....87½&10%
R. H. Blued Steel....85&5%
F. H Jap'd Steel....82½&5%
F. H. Brass ....85&5%
R. H. Brass ....80&5%
R. H. Nickel Plated....75%

SCYTHES.

Clipper, grain....per doz..$9 25
Dutchman, grass .... " 6 00
Golden Clipper, grass. " 5 50
U. S. A., grass.... " 7 00

SETS.

Nail.
Round, common....per doz..$0 33
Square " .... " 42
Octagon " .... " 33
Square, Buck Bros.. " 1 25
Cup Point, knurled, pr doz. 70c@90c
Rivet.
Farmers'....per doz..$1 45
Tinners'....50&10%
Saw.
Aiken's Pattern....per doz..$3 50
Common Lever.... " 1 20
Disston's Monarch... " 6 50
" X Cut .... " 11 75
German.... " 1 35
Morrill's Old Style... " 5 00
" Pattern.... " 4 50
Leach's.... " 4 80
Nash's Hand.... " 4 00
" X Cut .... " 5 50
Stillman's Lever.... " 1 30
" X Cut.... 2 50

SHARPENERS—SKATE.

Diamond....per doz..$1 60

SHAVES—SPOKE.

Iron....per doz..$1 35@$2 75
Wood.... " 2 75@ 4 75
Bailey's....50&5%
Goodell's....15%
Stanley's Universal....30&5%
Pruning. SHEARS.
Buckeye, No. 1....per doz..$6 50
" No. 2.... " 8 50
California Pat., 9 in.. " 4 25
" 10 in.. " 5 00
Draw Cut, No. 3.... " 15 50
" No. 4.... " 18 50
Henry's Pat. 0 01 14 012
Per doz...$1.90 $2.50 $3.15 $3.50
Star....per doz..$4 75
Sheep—No. BBA.
6 in. 6½ in. 7 in.
Reg.Grip..$11.00 $11.35 $12.00 doz.
Nar.Grip.. 11.20 11.00 12.15
Tinners'—See Snips.

SHEAVES—SLIDING DOOR.

In. 3 4 5
Common..Per set..$0.42 $0.48 $0.70
Hatfield's.. " .75 1.00 1.60

SHELLERS—CORN.

Union ....per doz..$7 25

SHOT—See Ammunition.

SHOVELS AND SPADES.

Drain.
Iwan's Perfection....50%
Railroad, Etc.
Gold Hibbard's....per doz.. $9 25
C. H. Conovers's.... " 7 75
Beckwith's.... " 7 75
Hickory.... " 6 25
Greenleaf's.... " 5 75
Columbus.... " 5 00
Ames' new list....Discount 12½%
Coal.
No. 2 Ajax....per doz..$5 25
No. 4 Golds.... " 6 25
Ames' new list....Discount 12½%

SIEVES.

Champion....per doz. $ .90
Hunter's Genuine.... " 1.10
" Imitation.... " .90
Tin Rim, 16 mesh plain wire" 1.35
Wood " 16 mesh plain wire" .80

SINKS.

Cast Iron.
Painted....50%
Enameled, White.... ....60&10%
Wrought Steel.
Painted, new list....40-10&5%

SLEDGES—See Hammers.

SNAPS—HARNESS.

Champion....65%
German Pattern....30&5%
Judd's Pattern .....60&10%@70%

SNATHS.

Double Ring, Bush....per doz..$6 50
Patent Loop " .... " 7 00
" " Brass.... " 6 25

SNIPS—TINNERS'.

Hernisch's....40&5%
National....40&5%
P. S. & W. Co.'s....25&5%

SOLDER.

See Metals, Column 1

SPRINGS—DOOR.

Perfect. Nos. 1 2 3 4
Per doz.... 32c 38c 45c 48c
Reliance, Light $1.40, Heavy $2.20 doz.
Star.... " .90, " 1.20 "
Torrey's....per doz..$1 35
Warner's— No. 1 No. 2
Per doz.... 72c $1 45

SQUARES

Steel and Iron....70%
(Add for Bluing, $2.50 per doz., net.)
Mitre—Stanley's No. 12....40%
Try.
Stanley's No. 20, new list...30&10%
" Nos. 12 and 14....40%
Try and Bevel—Stanley's....40&5%
Try and Miter.
Fox's....per doz..$7 25
Winterbottom's....50%

SQUEEZERS—LEMON.

Common Wood....per doz..$0 72
Porcelain Lined, wood. " 1 20
Boss, tinned iron .... " 84
Pearl, nickel plated... " 1 30
Star " " .... " 1 60
Little Giant, tin'd iron " 4 25
King.... " 2 50
Drum.... " 4 50

STAPLES.

Blind—Barbed....per lb. 9½@10c
Butter Tub.... " 8@8½c
Fence, less than carload.
Polished....per 100 lb. $2 40
Galvanized.... " 2 80
Netting—Galvanized....per keg 3 00
Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples.... 85-10&5%
Extra heavy....75&10%

STEELYARDS.

Discount 25%

STONES.

Axe.
Hindostan ....per lb. 5½@7c
More Grit.... " 9½c
Washita.... " 16½c
Emery....60%@60&5%
Oil—Unmounted.
Arkansas Hard ....per lb. $2 00
Arkansas Soft .... " 1 15
Hindostan .... " 6½@6½
Lily White.... per lb 43c
Queer Creek.... " 14½c
Ouachita.... " 36c
Washita.... " 25c
Sythe.
Black Diamond....per gro. $7 75
Clear Grit .... " 4 25
Gem Corundum.... " 7 50
Green Mountain.... " 4 20
La Moille.... " 7 00
Pikes Gen. No. 1, Ind. Pond., per gro 4 75
White Mountain....per gro. 6 50
Willoughby Lake .... " 6 25
Red End .... " 3 15

STOPS—BENCH.

Hotchkiss'....per doz. $3 60

STOPPERS—FLUE.

Common ....per doz. 42c
Crown.... " 48c
Gem, flat, painted.... " 72c
Gem, cor'd, decorated.... " 68c
Kirch's .... " $1 20
Peerless .... " 72c
Skinner's Common Sense " 95c

STRAPS.

Scoop ....per doz. prs. $1 80
Skate.... " " 60@70c

STRETCHERS.

Carpet.
Bullard's....per doz. $3 90
Excelsior .... " 5 50
Malleable Iron.... " 70
Perfection .... " 6 00
King .... " 4 50
Wire.
N. S. Elwood's ....per doz. $5 75
O. S. Elwood's.... " 5 75
Little Giant .... " 5 50
Star Lever.... " 6 25
Star Tackle Block.... " 9 25
Warner's .... " 6 25

SWIVELS.

Malleable Iron ....per lb. 6½c
Wrought Steel....per gro. $4 50

TACKS.

American Cut....90&5%
American Wire....85&25&10%
Bill Posters Cut ....90&40%
Blued Carpet....90&15%
Tinned Carpet....90&15%
Gimp ....90&30&10%
Upholsters' Cut ....90&40&5%
Upholsters' Wire ....90&25%
Double Pointed ....90&20%
Copper ....per lb. 27c
Canvas Nails....75&5%
Clout Nails....75&10&5%
Hungarian Nails....80&5%

TAPES—MEASURING.

Asses' Skin ....40&10%
Bend Leather....35%
Patent Leather....25%
Lufkin's Steel....30%
Lufkins Metallic 30%

TENTS AND PAULINS.

Wall Tents 50%
Wedge Tents ....50&5%
Paulins 45%
Wagon Covers....45%

THERMOMETERS.

Tin Case....per doz.. 95c@$1 25
Wood Back.... " $1 75@ 9 00
Glass .... " 15 50

TIES.

Bale.
Single Loop.... 80&10%
All other kinds....70%
Cow—See "Chains."

TONGS.

Crimping—Packham's...per pair 50c
Gutter—P. S. & W. Co.'s.....15&10%
Pipe—Brown's 50%
Roofing—P. S. & W. Co.'s ....15&10%

TOOLS—SAW.

Atkin's Dexter....per doz. $4 25
Atkin's Excelsior.... " 6 25
Disston's Universal 40%
McDonald's 33⅓%

TRAPS.

Game.
Newhouse....50%
New Victor 80%
Mole—Reddicks ....per doz. $5 75
Mouse and Rat.
Wood Choker....per hole 10c
Tin Choker .... " 11c
Delusion....per doz. 85c
Imitation Sight, Rat .. " 80c
Marty Rat.... " $6 75
Marty Rat, Imitation.. " 3 75
Marty Mouse.... " 3 15
Marty Mouse, Imitation " 2 10
French Automatic.... each $3 60
Fly.
Balloon....per doz. $1 10
Harper's.... " 1 25

TROUGH—EAVE.

Eastern.... .Discount 75&16⅔%
Central.... " 75&12½%
South Western.... " 75%
Missouri River.... " 75&12½%
Southern .... " 75&12½%

TROWELS.

Brick.
Standard....30%
Brade's....10&7½%
Disston's....30%
Rose's....25%
Plasterers'.
Standard 33⅓%
Disston's....30%
W. & McP....25%

TRUCKS.

Bags....each $1 70
Handy.... " 1 50
Warehouse....60&5%

No. 1 2 3
Half Ironed....$2.60 $3.40 $5.00
Full Ironed.... 3.90 5.75 6.75

TUBS-WASH.

No. 3 2 1 Ex. large
Standard, per doz. $5.25 6.25 7.25 9.75
Dowel .... " 5.60 6.60 7.50 10.00
Cedar .... " 6.50 7.50 8.25
Indurated. " 7.20 7.95 9.45 11.70
Galvanized.
No. 1 2 3
Per doz $5.50 6.00 6.75

VISES.

Bonney's....30%
Cheney's....20%
Parker's Oval Slide....50@50&10%
Parker's Parallel....15@20%
Parker's Victor....10%
Parker's Combination....50&10%
Solid Box....50&5%
Adam's Mechanics'....each $2 50

WARE,

Cast-Iron Hollow.
Ground .... 40, 10&2½%
Unground .... 50, 10&2½%
Extra Finished....40%
White Enameled....40&5%
Maslin Kettles....65%
Enameled.
Adamant, one coat, 70&10%@75&10%
The manufacturers divide this ware into two classes, which take different discounts, noted above.
Chrysolite, three coat....40&5%

WASHERS.

Leather. In. ⅜ 1 1⅛ 1¼ 1⅜
Nut, per C....16c 17c 19c 25c 23c
Collar, per C...35c 40c 40c 43c
Wrought Iron.
In. ¼ 5-16 ⅜ ½ ⅝ ¾ to 1
Per lb...9c 8c 6¾c 5¼c 5c 4¾c
Wrought Steel.
In. ¼ 5-16 ⅜ ½ ⅝ ¾ to 1
Per lb .10c 9c 7¾c 6¼c 6c 5¾c

WEDGES.

Ax....per doz... 30c
Galling ....per lb..10¾c
Saw.... " .. 8¾c
Wood Choppers.
Lake Superior and Oregon, Pat ....per lb.. 9¾c
Reg. Pattern, Steel... " .. 4 c
Truckee " " ... " .. 4¼c

WEIGHTS.

Hitching....per lb..2½c
Sash—F.O.B. Chicago..pr ton..$27.00

WHEEL BARROWS.

Common Railroad....per doz..$16 00
Heavy " .... " .. 19 50
Railroad, ball bearing " .. 19 00
Santiago Steel Tray.. " .. 26 50
No. 04 Steel Dirt ... " .. 52 00
No. 04½ " " ... " .. 56 00

WHEELS.

Corundum....70&10&5
Emery....75&5%
Well. In. 8 10 12 14
Per doz.... $1.90 $2.20 $3.00 $5.50

WIRE.

Barbed. Painted. Galv'd.
Carloads...pr 100 lbs..$2.50 $2.80
Less than car " .. 2.60 2.90
Brass.
In coils....20%
In 1 lb. spools, new list....50&10%
Broom—Tinned....60&10&10&10%
Cable—Same price as Barbed Wire.
Copper.
In coils....20&10%33⅓%
In 1 lb. spools, new list....50&10%
Fence—Smooth.
Nos. 6 to 9, Annealed, pr 100 lbs. $2.10
Nos. 6 to 9, Galv'd... " 2.20
Hair—New list....50&10%
Market.
Bright, full bdles....70&10%
Bright, broken bdles....70%
Coppered, full bdles....70%
Coppered, broken bdles ....65&10%
Tinned, full bdles.... ....70&5%
Tinned, broken bdles....65&10%
Picture.
In coils....80%@80&10%
In 5 lb. spools ....per lb. 26c
Plain—Small lots....$2.00
Car lots.... ... 1.95
Small spools 5c per hundred higher

WRENCHES.

Acme Standard....60%
Alligator....65&5%
Always Ready....40&10&5%
Bemis & Call....40%
Coe's Standard.... .40&10%
Girard's Agricultural....75%
P. S. & W. Co.'s Agricultural....75%
" " Knife H'dle..50&5%
Wescott's "S"....33⅓%
Malleable....per lb..6¼c
Stillson Pipe....60&5%
Trimo " 60%

WRINGERS.

Clothes.
Nos. 22&110, Guarantee, pr doz. $22 00
No. 150, Sunshine .... " 18 00
No. 130, Mendota.... " 18 00
No. 12, Success.... " 16 00
Blue Bell, Ball Bear'g. " 25 00
No. D 110, Domestic... " 22 50
No. E 300, Empress... " 25 50
No. 122, Bicycle Ball-bearing.... " 27 00
No. 122, Swan.... " 27 00

Wants and Sales.

For yearly subscribers to THE AMERICAN ARTISAN will be inserted under this head advertisements of six lines WITHOUT CHARGE for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, businesses for sale, partners wanted, to exchange, etc. Those who respond to these announcements will please mention that they read the advertisement in THE AMERICAN ARTISAN.

BUSINESS CHANCES.

PATENTS HUBERT E. PECK, 623 F St., N. W., Washington, D. C. Consulting Expert in Patent Causes. U S. and Foreign Patents. Send for leaflet on "Rejected Patent Applications." Honest work but no "Something for Nothing" offers.

For Sale—On account of sickness, a clean stock of hardware and furnace business in north central Iowa, city of 15,000. Stock, fixtures and tinner's tools all new this year. Will invoice about $2,500. Address J., care The American Artisan, 69 Dearborn street, Chicago. 10-2

For Sale—A well established tin and cornice business in county seat town of 15,000 population. Plenty of work; several good contracts on hand. Good shop and cheap rent. Good reasons for wanting to sell. This is a snap for a tinner or cornice maker. Invoice about $1,200. Address Box 1135 Waterloo, Iowa. 10

Hardware Stock for Sale—Best location on the North Side; four street car lines intersect. Reason for selling have other business. Address "Other Business," care The American Artisan, 69 Dearborn street, Chicago, Ill. 9

I want to buy a stock of hardware, furniture and undertaking business if I can put in part pay good Eastern Nebraska lands (unimproved) that are fast advancing in value. I will deal for a stock from $6,000 to $10,000 and buildings. Address Box 148, Greely, Neb. 9

For Sale—Stock of hardware and fixtures; invoice about $6,700.00. Excellent location; good business; must sell on account of sickness. Address Guild Hardware Co., Watseka, Ill. 8

For Sale—For cash; $6,000 stock of hardware, stoves and paint, with a tin and plumbing shop in connection; this stock is located in northeastern part of Iowa in a good farming country. Address "Paint," care of The American Artisan, 69 Dearborn st., Chicago, Ill. 8

For Trade—Land owner will exchange good North Dakota land for hardware stock. Write for particulars. H. A. Ebert, Alden, Minn. 8

For Sale—$4,500 hardware and plumbing business, located in a prosperous town in San Joaquin Valley, California. For particulars address, J. S. V., care Geo. H. Tay Co., San Francisco, Cal. 8

For Sale—Clean hardware stock, with or without building, in a lively town of about 2,500 inhabitants, in northern Wisconsin; good reasons for selling. For particulars address Paul Schulz, Medford, Wis. 7

For Sale—A nice clean stock of hardware and furniture; invoice about $4,000; county seat town in center of best farming community in State. Address F. Matoushek, Butte, Neb. 7

Wanted—In northern county seat or manufacturing town, stock of hardware and furniture; must be a clean, up-to-date stock; we want to exchange an Iowa 160-acre improved farm located in celebrated Hiteman coal district, Monroe county, or income property in live town paying 10 per cent on $10,000; would consider residence property if desirable. Address "Property," care The American Artisan, 69 Dearborn st., Chicago. 7

Partner wanted to take an interest in a well-established hardware store; present stock $10,000; too much for one man to look after. For particulars address 115 West 11th st., Erie, Pa.

Tin, sheet iron and furnace business for sale cheap if taken at once. Paul M. Fink, 792 Van Buren st., Chicago. 7

Want to purchase good hardware store or hardware and furnace store; must be a good business location; business propositions only need be offered. Address T. P. Daniel, care F. G. Wood, Salt Lake City, Utah. 7

Wanted—Good stock of hardware or farm implements in Indiana or Illinois for a good Illinois farm of 160 acres. Write for particulars. Address X, care The American Artisan, 69 Dearborn st., Chicago, Ill. 7

For Sale—At once, a well-established tin and furnace business in an up-to-date town of 2,000 population in northeastern Kansas; good location, cheap rent; good reason for selling; if you are looking for a snap investigate at once. For particulars address "Bargain," care of The American Artisan, 69 Dearborn st., Chicago, Ill. 7

TINNERS' TOOLS.

For Sale—Second hand 8 ft. Robinson cornice brake, cheap. Dreis, Andrews & Krump, 3214 S. Halsted street, Chicago, Ill. 10

I want to sell a set of tinners' tools at once. Will sell cheap. For list and price, address E. J. Countryman, Dixon, Ill. 10

For Sale—One 8 ft. Robinson's improved cornice brake with gutter bender attachment; only used one year; it is in good condition. Chas. Skidd, 121 Milwaukee avenue, Kenosha, Wis. 10

For Sale—A set of tinner's tools in first-class condition. Will sell cheap for cash If you are looking for a snap don't fail to investigate this offer. For further particulars call on or address Ed. Hyre, Saybrook, Ill. 10

For Sale—One Peck, Stowe & Wilcox squaring shears in fairly good condition. Will sell cheap. New blades. C. A. Peck Hardware Co., Berlin, Wis. 9

Wanted—To buy a 30-inch or larger gap square in first-class condition, or an 8-foot square shear. Address Box 316, Chillicothe, Ill. 8

For Sale—Tinner's tools in first-class condition; 50 to 60 per cent. off list. Address Box 316, Chillicothe, Ill. 8

For Sale—Stow's No. 01 brass mounted 20-inch groover, $6.00; Stow's No. 4 beading machine, encased and standard, 6-in. arm, $9.00. C. F. Troeller, Larrabee, Ia. 8

Wanted—A set of tinner's tools; must be cheap for cash. Henry Field, Hope, N. D. 7

Wanted—Second-hand machines in good condition, 1 pair squaring shears, several rollers, a folder, a setting-down machine, a burring machine and a turning machine. Address "Shears," care of The American Artisan, 69 Dearborn st., Chicago, Ill. 7

HELP WANTED.

Wanted—Two good all around tinners; state wages wanted. Hoernel Hardware Co., Racine, Wis. 10

Wanted—Clerk for hardware and stove store by Oct. 1st. Geier & Peppler, 700 Lincoln avenue, Chicago, Ill. 10

Wanted—First-class stove salesman; box 43, Care of The American Artisan, 69 Dearborn St., Chicago, Ill. 10

Wanted—Good all around man, steady position for tinning and furnace work. Call at once. Schuetz & Moore, 904 Chicago Ave., Evanston, Ill. 10

Wanted—A good reliable tinner, one that can do cornice work and slate roofing. Steady work the year around, nine hours. J. H. Jones & Son, Streator, Ill.10

Wanted—Experienced hustling stove salesman for city and country; good line. Address Hustling Salesman, care The American Artisan, 69 Dearborn st., Chicago, Ill. 10

Wanted—At once, ½ foot Robinson cornice brake and 1 slate punch. Must be in good condition and cheap. Give price and description. Kimmell & Fitzsimons, Parsons, Kans. 10

We want a No. 1, good, sober tinner, one who can do all kinds of tin and furnace work. Write or call on M. Reinhardt's Sons, 205 S. Sangamon street, Lincoln, Ill. 10

Wanted—Tinner and sheet metal worker. Must be first-class. Steady position for a good man, married preferred. Address, stating experience and wages wanted, Box 363, Mishawaka, Ind. 10

Wanted—Tinner, or one who understands tin work and pumps and wind mills; a steady job; must be sober; prefer married man; can have work very soon. W. P. Torboss, Hebron, Ill. 10

Wanted—A first-class tinner, one who can put in bath tubs and furnaces. Must be sober, steady and reliable. Good wages the year around. Married man preferred. Address at once B. F. Phipps, Pendleton, Ind. 10-1

Wanted—A good tinner. All around workman for inside and outside work. Young man preferred. Must be strictly sober and a hustler. State experience and wages wanted. A. O. Giese, 226 and 228 East Third street, Winona, Minn. 10

Wanted—A good tinner, must be sober, who can also do plumbing and furnace work. Fully capable to do such work as generally comes in in a town of 1,500. State wages, and address L. F. Schroeder, Barrington, Ill. 10

Wanted—A young man to clerk in hardware store who has some knowledge of tin work and willing to work in shop when needed. Good references required. State wages, age, etc. Address A. L. Miller, 1620 East Washington street, Indianapolis, Ind. 10

Wanted—Tinner and furnace man. Must be a strictly first-class mechanic. Prefer one who has some knowledge of plumbing. Can give permanent position at good wages. State age, experience and wages wanted. E. C. Dedrick, Langdon, N. Dak. 10

Wanted—Foundry foreman in stove foundry employing one hundred molders. Must be strictly sober and competent to assume full charge. Name references and salary expected. Address S. W. B., care of The American Artisan, 69 Dearborn street, Chicago, Ill. 10

Wanted—At once, a good all-around tinner, can give steady work; must be sober and reliable; state wages. F. L. Ray, Darlington, Wis. 9

Wanted—At once, an all-around tinner, one with some knowledge of plumbing preferred; married man desired; must be strictly sober. Steady work the year round. Williams & Ripley Hdw. Co., Winchester, Ind. 9

Wanted—A tinner. We want a first-class man familiar with general job work to whom we will pay good wages and give steady employment the year round. Address "Year," care The American Artisan, 69 Dearborn street, Chicago, Ill. 9

Wanted—At once, a tinner, must be a strictly first-class mechanic and thoroughly understand hot air heating; no other need apply. To such a man I can give a permanent position at $75.00 per month. Give age. Address E. C. Dedrick, Langdon, N. D. 9

Wanted—Tinsmith, first-class, must be good on furnace work. Address Eugene Flagler, Dwight, Ill. 9

Good tinners wanted, Mohr-Jones Hdw. Co., 315 Sixth street, Racine, Wis., 9

Wanted—At once, a good second tinner who can do roofing, guttering and some bicycle repairing if necessary. This will be a permanent place for a good man. Fargo Hardware Co., Fargo, N. D. 9

Wanted—Tinners and helpers; no basement shop. Martin Engelhart, 473 Lincoln ave., Chicago. 8

Wanted—Four first-class cornice and furnace men; 35 cents per hour to the right men. Raymond & Bailey, Mason City, Iowa. 8

Wanted—Two good tinners for furnace work. Steady work to good, sober men. The Rollyn Hawkins Co., Indianapolis. 8

Wanted—At once, clerk in stove and tin store. State experience and wages wanted. Address, F. B. Karl, Delaware, Ohio.

Wanted—Two of three good cornice makers; steady work. Henry Weyand, Waterbury, Conn. 8

Wanted—Nickel plater. A first-class boss nickel plater and polisher is open for an engagement; wages reasonable and first-class references. Address ABC, care The American Artisan, 69 Dearborn st., Chicago, Ill. 7

Wanted—A good tinner who can also do plumbing and furnace work; fully capable to do such work as generally comes in, in a town of 1,500 people. State wages and address C. J. Johnson, Dell Rapids, South Dakota. 7

Wanted—A first-class tinner on all kinds of job work. Call or address at once, 96 Plummer ave., Hammond, Ind. 7

Wanted—Good hardware and stove man, one who understands sewing machines preferred; state salary wanted. Address John Stoelzle, Murphysboro, Ill. 7

Wanted—Good all round tinner and furnace man to run my shop; the right man can share in the profits. Write or call for two weeks, 7105 So. Chicago ave., Chicago, Ill. 7

Wanted—At once, tinners, slaters and sheet metal workers; steady work to right ones. Bailey & Keeley, Newark, Ohio. 7

Wanted—An experienced tinner and furnace worker; must be reliable and able to go ahead with work; permanent job for the right party. Address Gemke Bros. & Busch, Delphos, O. 7

Wanted—Foreman for nickel plating room and also stove mounters. Address "Foreman," Care of The American Artisan, 69 Dearborn St., Chicago, Ill. 6

SITUATIONS WANTED.

Wanted—Permanent position with a progressive firm, by a first-class furnace man and tinner; 14 years' experience; strictly temperate; good solicitor. J. G. Wimmer, 404 Queen st., Dubuque, Ia. 8

Position Wanted—German American tinner wants job by October 1st. Am a hustler; 5 years' experience; 27 years old; can do furnace work, clerk in store, etc.; am pleasant and of good habits. Address, H. Ebert, Alden, Minn. 8

Wanted—Position as traveling salesman in Indiana or Illinois for stoves, hardware or kindred lines; will furnish good references, etc. Address Y, care The American Artisan, 69 Dearborn st., Chicago. 7

Wanted—By a first-class tinner and furnace man, a position either in Michigan or South Dakota; best of reference. Write for particulars. F. W. Bates, Erie, Ills. 7

Situation wanted by a young married man; aged 27; 10 years' experience in tinning; can do a first-class job of plumbing or hot air heating; also good at general repair work; would like permanent job in town of 5,000 or larger; can furnish best of references; when writing please state wages. Address K. C., care of The American Artisan, 69 Dearborn st., Chicago, Ill. 7

Wanted—Position as salesman on road, jobbing and large trade preferred; have had twenty years' experience in gas, gasolene and general line of stoves; am also posted on hardware or hardware specialities; had charge of branch house in Chicago for a number of years; reasons for wanting position, sold out my retail business. Address "Traveler," Box 53, Care of The American Artisan, 69 Dearborn St., Chicago, Ill. 6

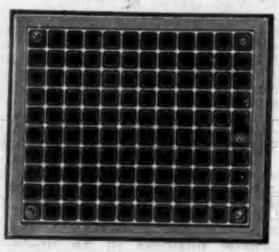
SPECIAL NOTICES.

I WOULD LIKE to go to a progressive western city to start to manufacture cornices, skylights, ventilators, finials, etc. I have a thorough practical and business experience and can furnish abundant evidence that there is a great demand for this class of goods. There is a barrel of money in the business if handled properly and it only requires a small capital to start. Would like to correspond with a business man who wishes to make a paying investment. Will furnish references and prospectus to one interested. Address, STARTER, P. O. Box 946, Milwaukee, Wis.

PLEASE READ THIS!

For anything in the way of cheap printing machinery, fancy stationery, chromolitho pictures, etc., etc., we are prepared to accept agency. We could also supply coin mats, plumbago, mica, precious stones and Ceylon tea. Samples, catalogues and terms wanted and given. Correspondence respectfully solicited.

J. WICKRAMANAYAKA, Kalutara, Ceylon.



A Marvelous Advance

In register making has reached its climax in the Hart & Cooley Steel Floor Registers, Face Plates and Borders. Each wrapped and packed separately in pasteboard boxes. Points of superiority are so evident that mention of them seems unnecessary, but they include a saving in freight and breakage and no shop worn goods. They will not break or warp. Any finish and metal may be had. The Black and White Japanned Finishes on these registers is perfection itself.

Write us about them.

NORRIS & LORING HARDWARE CO. Exclusively Wholesale, Cedar Rapids, Iowa.

HOT WEATHER — MAKES — LOOSE SPOKES

Repaired in a minute with Monarch Clamps. You can put them on yourself.

10 CENTS.

C. W. HUGHES, Care Hoyt Metal Co. St. Louis, Mo.

FOR SALE.

Stock Hardware, Paint, Oils and Stoves. $9,000 to $12,000, located midway between New York and Buffalo, doing retail, jobbing and mail order business; an unusual opportunity; owners desire to retire. Write for particulars. Address, Builders' Hardware, care American Artisan, 69 Dearborn St., Chicago, Ill.

WHY YES.

We have two patented articles made of galvanized iron, which can be made in any tinshop, for which there is good demand everywhere, and in which there is good profit. Retails from 75c up to $50, according to size made. Good job for side line in shop to keep tinners busy at odd times. We lease Rights to build on small Royalty. For particulars address

ROYALTY, P. O. Box 333, MILWAUKEE, WIS.

SALESMEN

Calling on Stove and Hardware Merchants in each state and territory can secure a fast selling specialty on which a good commission is paid, by addressing the

SCHREIBER & CONCHAR MFG. CO., Dubuque, Iowa. 6

FOR SALE

3,000 feet of Excelsior Wall Pipe, also large stock of Boots and all Fittings for same. Will be sold in small lots at special cut prices to close out. Write for prices and catalogue to order from. Address, "Chicago," care The American Artisan, 69 Dearborn St., Chicago.

FOR SALE.

Stock and good will of wholesale and retail Hardware business, in city of 175,000 people.

Growing and prosperous trade territory surrounding it.

Stock will inventory about $100,000.00.

Can be reduced, if retail business only is desired.

Double this amount or more, can be profitably employed in jobbing trade.

Address for particulars,

10-3 Box 680, Denver, Colorado.

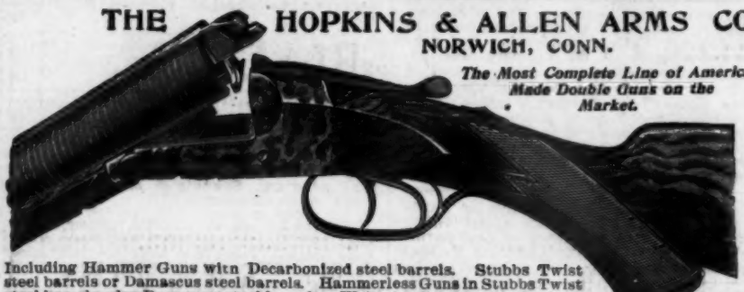
HIGH GRADE RAILROAD, PLUMBING, PAVING, MASONS AND ROOFING TOOLS

Gravel Roofers' Scratching Bar.

A. W. ISELE & SON, Boston, Mass.

THE HOPKINS & ALLEN ARMS CO.
NORWICH, CONN.

The Most Complete Line of American Made Double Guns on the Market.



Including Hammer Guns with Decarbonized steel barrels. Stubbs Twist steel barrels or Damascus steel barrels. Hammerless Guns in Stubbs Twist steel barrels, also Damascus steel barrels. Write for Catalogue and prices.

HOPKINS & ALLEN ARMS COMPANY, NORWICH, CONN.

FIRE brick and stove linings can in no way be repaired so quickly and so thoroughly as by the use of Dixon's Stove Cement which makes a close, hard durable repair. Ask for booklet 18-1.

JOS. DIXON CRUCIBLE CO., JERSEY CITY, N. J.

STYLE No. 1.
Size irregular like cut. About 200 in a cubic foot.

INCANDESCENT GAS FUEL

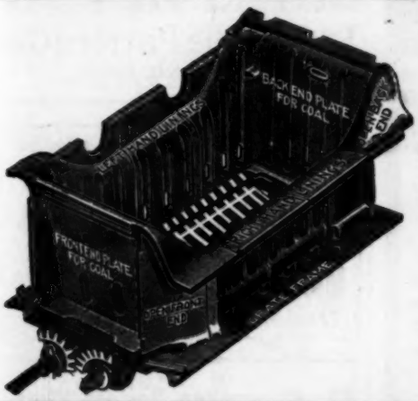
FOR GAS STOVES AND CASKET GRATES.

Contains the Best Features of the Modern Gas Fire and the Old Time Open Fire Place.

Write for Circular. Samples Sent Free by Mail.

WILLIAMS STOVE LINING COMPANY,

TAUNTON, MASS.



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Manufacturer and Jobber of

Stove and Range Repairs

Repairs for all Stoves and Ranges.
Adjustable Stove Repairs a Specialty.

MICA, URNS, KNOBS, RODS AND STOVE BOLTS.

325-331 North Lincoln Street.
Branch, 229 North Wells Street.
Phone 559 North.

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STAY-IN FLUE STOPPER

BRASS FINISHED. NICELY DECORATED.

We consider it the Best on Earth and it is sold with a positive guarantee to be absolutely soot proof. It cannot be pulled, jarred or blown out of the flue hole.

STUBER & KUCK, PEORIA, ILL.

ELECTRIC TRAVELING CRANES

Capacity to 200 Tons in Any Span. Crane Book F when requested.

PAWLING & HARNISCHFEGER

238 Oregon Street, MILWAUKEE, WIS.

FOX SHAVING SETS

Every article in this set is guaranteed. The razor is a Fox, which is known all over as the best made. It retails for $3.

FOX CUTLERY CO.
DUBUQUE, IOWA

$3.00 SAVED

TO ALL POINTS EAST AND WEST VIA THE D&B LINE.

"Just Two Boats" BETWEEN DETROIT & BUFFALO

DETROIT & BUFFALO STEAMBOAT CO.

COMMENCING MAY 11TH
Improved Daily Express Service (14 hours) between
DETROIT AND BUFFALO

Leave DETROIT Daily . . 4.00 P. M.
Arrive at BUFFALO . . . 8.00 A. M.
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Connecting with Earliest trains for all points in NEW YORK, EASTERN and NEW ENGLAND STATES. Through tickets sold to all points. Send 2c. for illustrated pamphlet and rates.

Rate between Detroit and Buffalo $2.50 one way, $4.50 round trip. Berths $1.00, $1.50; Staterooms $2 50 each direction. Week end Excursions Buffalo and Niagara Falls.

IF your railway agent will not sell you a through ticket, please buy a local ticket to Buffalo or Detroit, and pay your transfer charges from depot to wharf. By doing this we will save you $3.00 to any point East or West.

A. A. SCHANTZ, G. P. T. M., Detroit, Mich.

A. E. Jacobson,
Sheldon, Iowa, writes:

"Please take my adv. out as I can't handle all answers at all—telephone, telegraph and a hundred letters. I am up a stump."

REPAIRS FOR ALL STOVES AND FURNACES

Stove Rods, Paste, Stove Putty.
Stove Knobs, Pipe Dampers, Nics, Etc.

Wm. T. Dust Co., Detroit.

REPAIRS FOR ALL STOVES AND RANGES.

A. G. BRAUER, 316-318 NORTH THIRD ST ST. LOUIS MO.

UNCLE SAM DAMPER! THE PIONEER STEEL DAMPER

FURNACE PIPE DAMPER.

The handle is enameled wood, will not heat, rigidly clamped and cannot come off. The spring is not affected by heat. The stem is a steel rod, all one piece and nothing to fall apart; pointed and easily driven through the pipe. The Damper Plate is made of cold rolled pickled steel, corrugated to stiffen it and to prevent warping. We call special attention to lightness and strength of these Dampers and their desirability for FURNACE pipes.

"The Difference in Weight Pays the Freight."

Ask Your Jobber for the "UNCLE SAM."

SAYRE STAMPING CO., Sole Manufacturers, SAYRE, PA.

Champion Stove Clay

The only Stove Lining made of crucible materials.
Packed in 2½ lb., 6 lb. and 10 lb. pasteboard boxes and also in bulk.
Order it from your jobber.
The best and most refractory lining made.

Bridgeport Crucible Co.
BRIDGEPORT, CONN.

P. E. D. UNDERWOOD, Sullivan, Ill., writes:

'I value your paper very highly as authority on the subjects it treats."

The GEO. W. COPE STOVE PATTERN WORKS
Cor. Brush & Woodbridge Sts.
DETROIT, MICH.

DO YOU WANT **STOVES AND HEATERS** that are easily sold and STAY SOLD. We have been very successful in designing patterns for such.

The Gobeille Pattern Co.
CLEVELAND, OHIO.

PATTERNS FOR STOVES—RANGES—FURNACES
SEND FOR CUTS.
Mersfelder Pattern Works
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The Milwaukee Pattern Works
Sketches and Designs for
STOVE AND HEATER WORK OF ALL KINDS.
Correspondence Solicited.
505-507 Cedar Street. MILWAUKEE, WIS.

The "Weber Junior" Pumper

Can also be used for other power purposes.

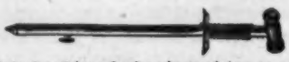
is all complete, ready to attach to pump. Equals 30 men pumping water. Uses but little gasoline. Is shipped crated completely erected, all connections made. Easy to start, any one can operate it. Every one guaranteed. Other sizes up to 30 H. P. Send for catalog. Weber Gas & Gasoline Engine Co., P. O. Box 225 Kansas City, Mo.

THE YANKEE (IMPROVED ALL STEEL) DAMPER.

HOT AIR.

THE YANKEE EXCELS.

Above All—Cheapness—a dealer cannot possibly make dampers as cheaply as we sell the Yankee. Easily put in and taken out of pipes. Stiffest, quickest-working and neatest damper on the market.



It is impossible for this rod when in position to move either way.

ROD POINTS: Has wood enameled handle. Wood handle cannot come off. Washer and spring cannot fall off the rod. Same size of holes are punched on each side of pipe. Rod is made of ¼ in. cold-rolled steel and slips into damper very smoothly. **Sample sent to any Dealer without charge.**

SMOKE PIPE.

The S. M. HOWES CO., Manufacturers, 40-46 Union St., Boston, Mass.

BLACK SILK STOVE POLISH

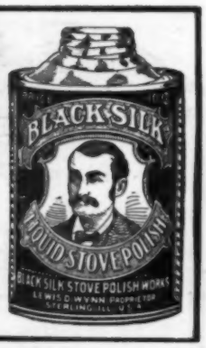
IT IS BLACK

Has been sold to the trade since 1884. and has never changed its name.

IT IS GOOD

NOT SOLD TO DEPARTMENT STORES OR MAIL ORDER HOUSES, BUT ONLY THROUGH REGULAR JOBBING AND RETAIL TRADE WHOSE ORDERS ARE SOLICITED.

MFG. BY THE BLACK SILK STOVE POLISH WORKS
STERLING, ILL.
LEWIS D. WYNN, PROPRIETOR



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A GOOD LINE TO TIE TO IS THE LINE OF

Polishing and Plating Material

Manufactured only by

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Send for General Catalogue

BARKEEPER'S FRIEND.

Marble, Glass, Nickel, Brass, Copper, Tin and German Silver

can all be cleaned and polished with it easier than with anything else.

Price 25c per lb.

Let us send you a free sample.

GEO. WM. HOFFMAN,
295 E. Washington St.,
INDIANAPOLIS, - IND.

FOR SALE BY JOBBING TRADE.

"Nothing except the mint can make money without advertising."—Gladstone.

Established 1874.

The largest and most reliable **Foundry Supply House** in the world.

THE
S. Obermayer Co.,
CINCINNATI, OHIO,
CHICAGO, ILL.
manufacturers

"Everything You Need in Your Foundry."

Importers and refiners
PLUMBAGO GRAPHITE.
Catalog Sent on Application.

ACME OVEN THERMOMETERS

THE BEST IN THE MARKET.

STYLE "C"

2¾-INCH DIAL

GIVE THEM A TRIAL.

MANUFACTURED BY

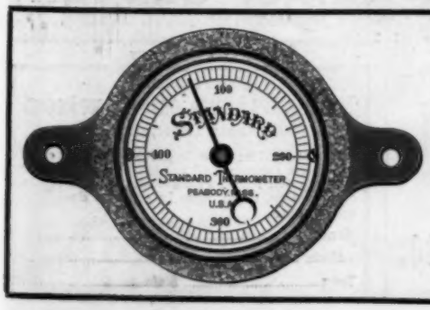
THE
EVANS STAMPING & PLATING CO.

TAUNTON, - MASS.

C. H. MATTHEWS, Detroit, Mich.
(Western Agent.)

STYLE "D"

2¾-INCH DIAL



OUR LATEST—NO. 460.

Standard Oven Thermometer

Send for Sample.

HELIOS-UPTON CO., PEABODY, MASS.

Or HENRY GLEASON, Agent, 258 Broadway, New York

U. S. N. TRADE MARK. M.

ROOFING TIN

MADE BY THE **MF** PROCESS.

The **MF PROCESS** of manufacturing roofing tin originated in South Wales two generations ago; from that time to the present the product of the **MF PROCESS** has been the most reliable and hence the **MOST FAVORED.**

Recently the **NEW METHOD** by which terne plates are finished in a manner that gives further protection against corrosion has been combined with the **MF PROCESS.** The result of this combination is the **U. S. EAGLE N. M.**

MF

AMERICAN TIN PLATE CO.

BATTERY PARK BUILDING,
NEW YORK, N. Y.

MARQUETTE BUILDING,
CHICAGO, ILLS.

BEATS THEM ALL

The O. K. Steel Brake. Patented March 29, 1901

Made in sizes to form 10 gauge and lighter. Cost only half as much as CAST IRON. It will take cast iron of three times its weight to equal it in strength.

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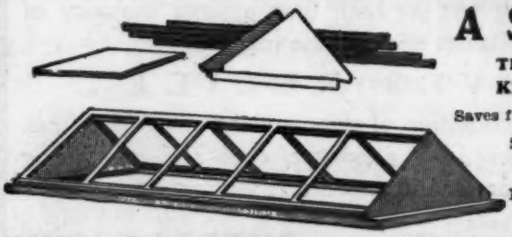

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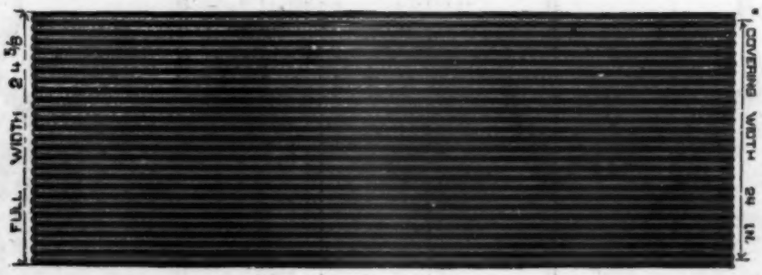

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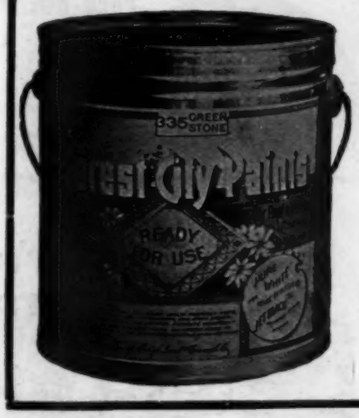

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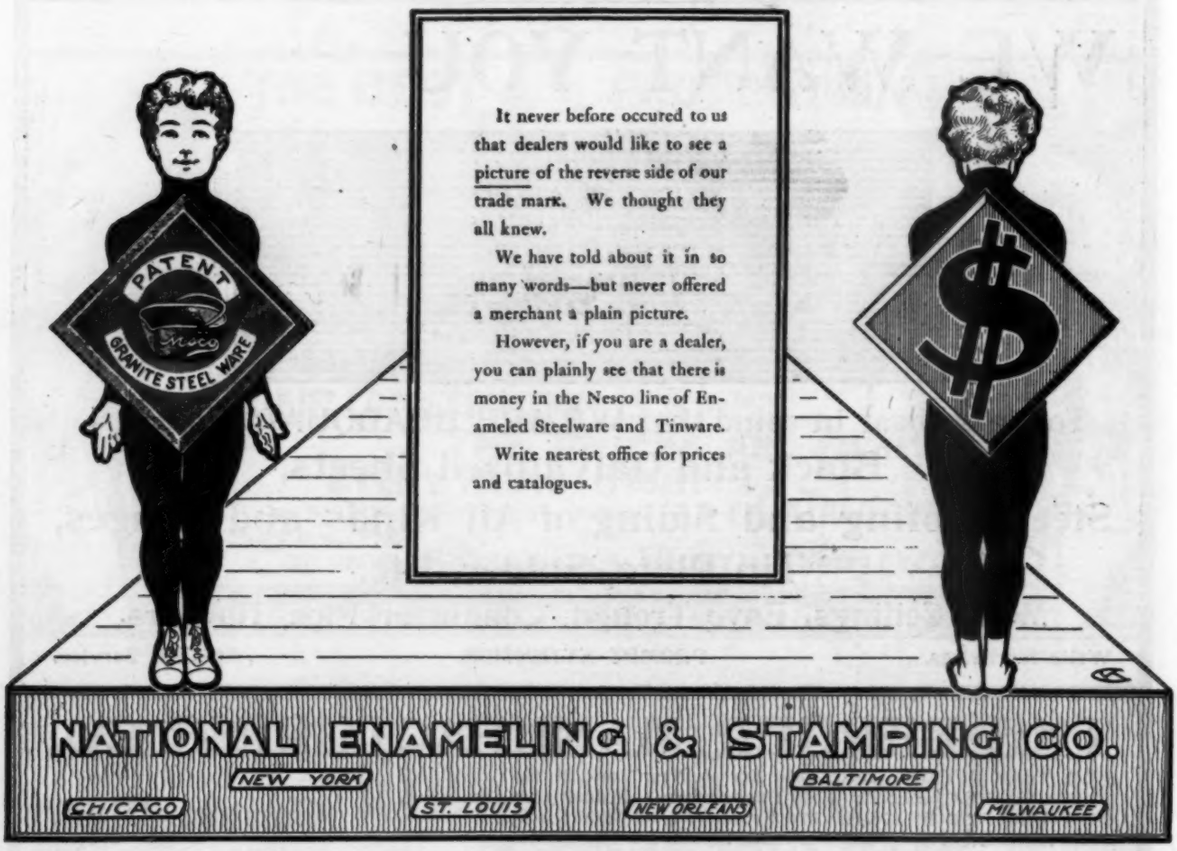

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We claim Purity and Safety, and Substantiate this claim with Chemists' Certificates.

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NO.

Patented Feb. 12, 1895.

COST	SELL

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It is *entirely free from arsenic, lead and antimony*—metals so often found in enameled goods.
Very respectfully,
STILLWELL & GLADDING,
Chemists to the New York Produce Exchange.

{ Pierre de P. Ricketts, E.M., Ph.D.
{ John H. Banks, E.M., Ph.D.

Analysis No. 14,180. New York, May 5, 1897.
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We find this enamel is *absolutely pure and free from Arsenic, Antimony, Lead, and other substances injurious to health.* We can therefore recommend it for all culinary and drinking purposes. Respectfully yours,
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Chemists to the N. Y. Metal Exchange.

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Read carefully the Chemists' Certificates.

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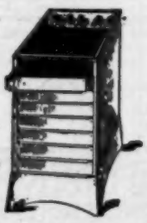

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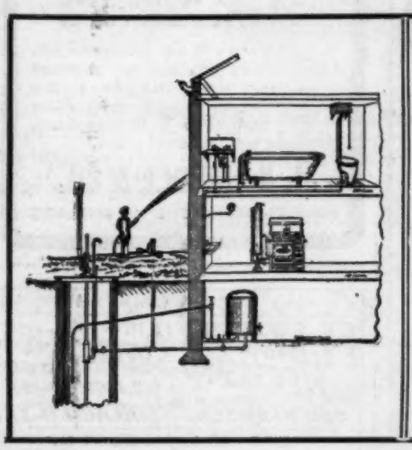

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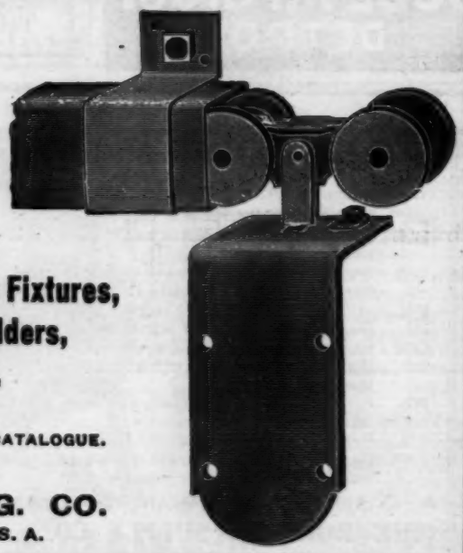

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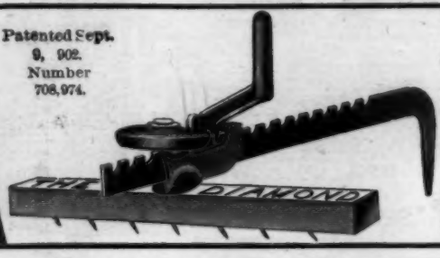

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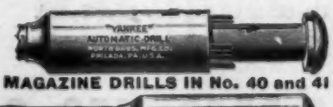

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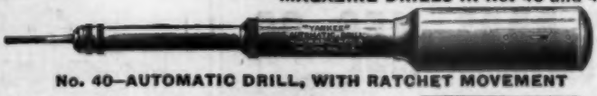

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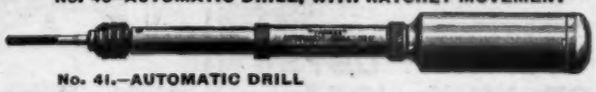

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Perfect washer,
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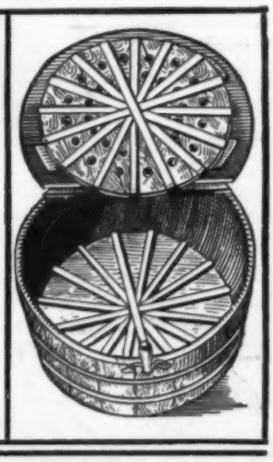

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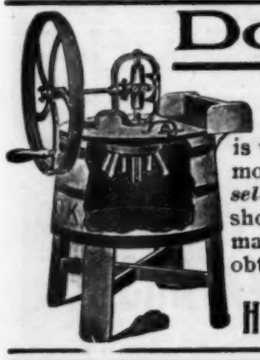

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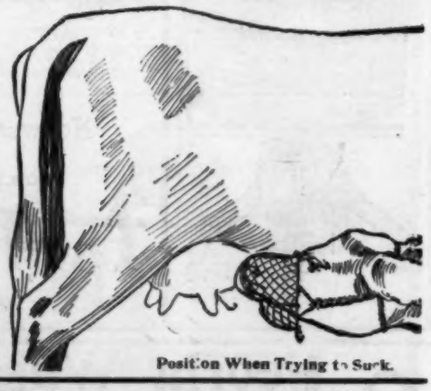

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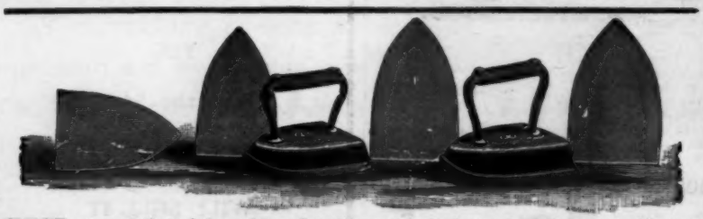

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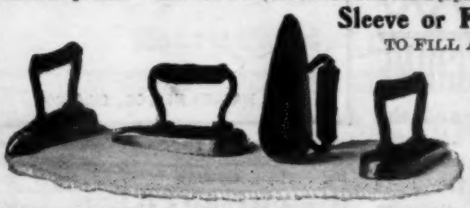

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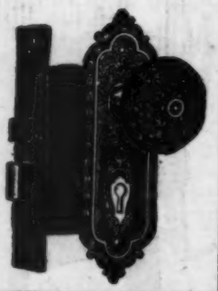

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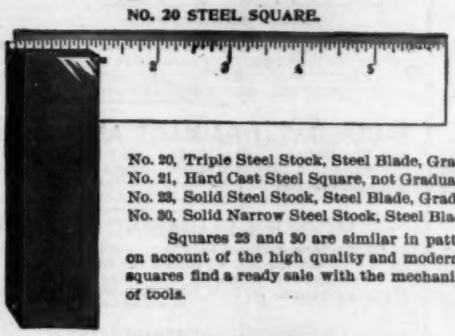

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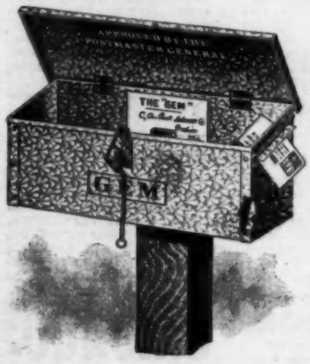

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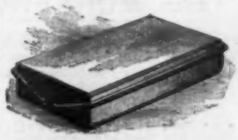

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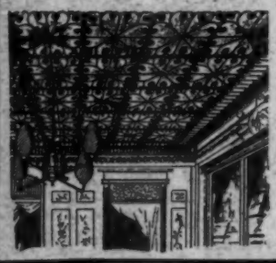

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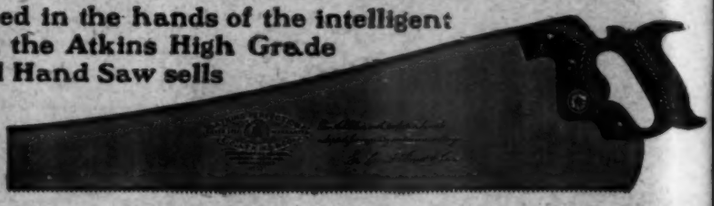

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